(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:	TC 7.9
TC/TG/TRG/TITLE:	Building Commissioning
DATE OF MEETING:	January 30, 2022
LOCATION:	Caesars Palace, Milano IV (P) Las Vegas / Hybrid

MEMBERS

PRESENT	MEMBER NAME	TERM	PRESENT	MEMBER NAME	TERM
☒	Mina Agarabi – Chair	2021 - 2022	☐	Bradley Brooks	2017 - 2021
☒	Dave Shipley – Vice Chair		☐	Wade Conlan	2017 - 2021
☒	Mike Amstadt– Secretary	2018 – 2022	☒	Gerald Kettler	2015 - 2019
☒	Thomas Cappellin - Membership	2015 – 2019	☐	Justin Garner	2018 - 2022
☒	Dave Shipley- Research / Web	2018 - 2022	☐	Jim Vallort - Programs	2018 - 2022
☐	Ole Teisen	2016 - 2020	☐	Roger Lautz	2018 - 2022

NON-VOTING MEMBER SUBCOMMITTEE CHAIRS

PRESENT	NAME
☐	David Sinclair– Journal & Insights
☐	Walter Grondzik
☐	– Honors & Awards / Standards

EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE

See Attached sign in sheet

DISTRIBUTION

All Members of TC/TG/TRG plus the following:	
TAC Section Head:	Craig Messmer
TAC Chair:	Thomas Justice
All Committee Liaisons As Shown On TC/TG/TRG Rosters:	**Steve Hammerling**
Manager of Standards	Rick Heiden
Manager of Research & Technical Services	Michael R. Vaughn

1. Call To Order / Scope / Introduction

- Mina Agarabi (Chair) called the meeting to order at 3:30 PM. All who were present provided self-introductions, including their name and affiliation.

2. Voting Member Roll Call

- There were 4 voting members present out of a total of 11 voting members. A quorum of voting members was not present for the meeting.

3. Approval of Virtual Minutes

Send as an online ballot

4. ASHRAE Administrative Matters / Issues from TC Chairs Breakfast

TC Chair's Breakfast Notes:

1. Minutes to be posted to basecamp
2. Balance to the groups and balance to the committee
3. Strategic plan was put out (effort to track the needs of the committees)
4. Section head report - Jamie Bennett
   a. Roster planning
   b. Activity form

TAC information available on ASHRAE update

5. Correspondence / Announcements

N/A

6. Society Liaisons

N/A

1. Sub-Committee Reports

- Membership...Tom Cappellin
    - 10 ...... Voting Members
    - 1 .... Voting – Non-Quorum Member
    - 2 .... Non-Voting Members who are 0fficers or subcommittee chairs
    - 21 ...... Provisional Corresponding Members
    - 166 ...... Corresponding Members
    - 200 ...... Total Committee Membership
    - 15 ...... YEA Members

- Program ....Jim Vallort

No report

- Research..David Shipley
    - Minutes on Basecamp site
        - RTAR moving along passed to TC7.5
        - Think about ideas for potential research projects (align with ASHRAR Strategic plan)
        - Research Chair gets training (Use research liaison for help to fill out RTAR)
- Handbook (Applications - Chapter 43)............................David Lewis & Ted Leonard
    - May 17th need to approve the revision to the handbook chapter, to send to handbook liaison.
    - Will be placed on Basecamp for review
    - Main updates around estimation and fee determination
- Standards ....Michael Sulva
    - Gaps in guideline and standards
    - Evaluate ideas for additional Cx documents
    - Update TC members
- Web Site...Mohammad Nasir Mallick
    - Website: http://tc0709.ashraetcs.org/
    - Lots of great content that goes back almost 20 years
    - Forward all content that should be on website to Website Subcommittee Chair i.e. Meeting Minutes, Programs. Subcommittee has 4 members at this time. So if you want to get something published, push it to one of them
- Journal and Insights ....David Sinclair

  No Report.

- Honors & Awards ....Thomas VandeWeerd
    - Requesting anyone that wants to be awarded by ASHRAE, please send requests to Honors & Awards chair
    - Information slide included with agenda and posted to basecamp

2. Cognizant Committee Liaison Reports

- SSPC 300 The Commissioning Process.............................Jerry Kettler
    - Need for members to join SSPC 300 use the following link. https://www.ashrae.org/technical-resources/standards-and-guidelines/apply-to-a-project-committee
    - SSPC main meeting announced
- Cx industry activities (outside of ASHRAE) Jerry Kettler
    - Notes attached to agenda
- ALI Commissioning Courses……………………………….Walter Grondzik
    - Notes attached

- GPC 1.7.. Bruce Pitts
    - o Seeking committee members

3. Other Committee Liaison Reports

- SSPC-62 "Ventilation for Acceptable IAQ"........................Open
    - o No report
- SPC-90.1 "Energy Efficient Design of New Buildings"............... Justin Garner
    - o In the process of starting.
- SPC-90.4 – Need Liasion
- SPC-111 "Testing and Balancing for New Buildings" ....Justin Garner
    - o In Standards for publication
- GPC-11 Control Components Testing ....Tom
    - o Published and Disbanded
- TC 7.1 "Integrated Building Design" ....David Allen
    - o David Allen not present
- TC 7.3 "Operation and Maintenance Management"...............Open
- TC 7.7 Testing and Balancing ....Justin Garner
    - o Meeting is tomorrow afternoon
- TC 7.8 "Owning and Operating Costs" ....Open
    - o No Update
- TC 9.6 "Healthcare" ....Roger Lautz
    - o No Update
- TC 1.6 Terminology ……………………………………………Roger Lautz
    - o No Update
- GPC41P- need a volunteer to attend
- MTG RAC & EBO– open slots
- AEDG "Advanced Energy Design Guidelines" ....Jay Enck
    - o Multifamily in the works
- Task for Building Decarbonization   ……………………. Lixia Wu
    - o Just formed. Lee Riback would be interested

4. Other Association Reports

- BCA Liz Fischer
    - o Revising online training
    - o Hybrid classroom training
    - o Leadership conference in March

- NEBB Bill Kinser

    - Cx Tech training May2-4th
- ACG Jim Magee / Justin Garner

    - Cx Tech training May2-4th
- AABC Justin Garner

    - Big focus on training
- ASTM Jay Enck
  No report.
- TABB – Soph Davenberry

    - Annual conference late April

    - https://www.icbcertified.org/the-19th-annual-icb-tabb-conference/
- Unassigned reports
    - USGBC

5. Old Business

None

6. New Business

● Transitions June 2022

● Interim Subcommittee Meetings

● Next Meeting – June Toronto Annual Conference -

● Open Discussion
Mitch – is ignoring new law would it affect Certificate of Occupancy.
Discussed what some states require for Cx reporting and credentialling

Liaison to Europe Cx activities (what was her name) Kate Vauter

7. Next Meeting

- June 24 to June 29th Toronto Annual Conference - In-Person but will accommodate remote participation needs .
- Dave Sinclair is on the region committee

8. Adjournment

- Meeting adjourned at 5:00 P.M. UTC

9. Action Items

- No Items.

10. Motions

- Motion for meeting minutes for 2021 Winter and Annual conference will be sent out for virtual vote

END OF MINUTES

The roster for the 2022 summer meeting will be the same as the roster for this winter meeting with the new roster taking effect after the summer meeting. Please review the recent changes to the TC MOP Section 1.4 requiring balance for TC voting members to avoid the appearance of bias or conflict of interest. **(Link for updated MOP:**
https://www.ashrae.org/file%20library/communities/committees/standing%20committees/technical%20activities%20committee/tc-mop-8.26.2021.docx).
This change to the MOP is a change from encouraging balance for voting members of the TC to requiring balance.

Other Liaison Reports:

TC 7.9 – Commissioning

Virtual Meeting – January 30, 2022

Report on SSPC 300, STD 202 and Industry Programs

By Gerald J Kettler, PE, CCP, CPMP, BEAP, BEMP

1. SSPC 300, *Commissioning*

    a. SSPC 300 is the master committee overseeing all the ASHRAE Cx standards and guidelines, and documentation coordination with Cx Industry organizations.

    b. There are active sub-committees for Standard 202, Guideline 0, 0.2, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, and 1.7. These sub-committees are activated for review and revision of those standards and guidelines. Some are needing additional members.

    c. A committee is actively developing an ASHRAE Standard 230 for *Commissioning Process for Existing Systems and Assemblies*. This EBCx process is generally based on the Guideline 0.2 process with updates. A first public review has been conducted. Appendixes are now being developed and added.

    d. Standard 202 and Guidelines 0, 0.2, and 1.4 are under Continuous Maintenance. Other Cx guidelines will be placed in continuous maintenance to facilitate changes as they are published and/or republished.

    e. Guideline 0, *The Commissioning Process*, has been revised and reissued in 2019. Guideline 1.1, *HVAC&R Technical Requirements for the Commissioning Process,* is currently being revised.

    f. The standard and guideline revision process proceeds according to the ASHRAE PASA and ANSI process. First the Cx document is revised by a subject sub-committee and submitted to SSPC 300 for approval to be processed for public review. Review comments are evaluated by the subject committee. Additional substantive revisions to the document responses may require additional public reviews. Editorial revisions do not need additional public review. The Cx document renewal process will then be approved by SSPC 300 and the document will be submitted for republication.

g. Ongoing Commissioning provisions are included in Guideline 0.2 and 1.2 and are intended to be included in the other appropriate ASHRAE commissioning standards and guidelines.

h. A new guideline, 1.7P *Ongoing Commissioning Process for Buildings, Systems and Assemblies,* has been initiated and needs members.

i. Commissioning Liaisons have been appointed to ASHRAE Standard 189.1, and 90.1.

j. Liaisons exist on SSPC 300 with ACG, AIA, BCxA, ICC, IES, NEBB, and NFPA.

2. Standard 202-2018 *The Commissioning Process for Buildings and Systems*

a. STD 202 has been referenced by ASHRAE STD 189.1-2020 and STD 90.1-2019.

b. Informative Appendix 'H' on commissioning process and documentation has been included in STD 90.1-2019. <u>The commissioning requirements in STD 90.1-2019 now includes the inspection and enforcement on most energy using systems including the building enclosure</u>

c. Many of the annexes and appendixes in STD 202 and other ASHRAE Cx documents have been revised and standardized as Annexes. These are intended to be utilized as separate annexes planned to be available individually on the ASHRAE cloud. This allows the ASHRAE commissioning standards and guidelines to refer to a common document to make the Cx process more uniform and simplify these publications.

d. Revisions are being made to delineate the separation of new building commissioning and existing building commissioning based on requests by the ASHRAE Standards Committee.

3. *The Commissioning Stakeholder's Guide* publication has been published as a special publication of ASHRAE and BCxA. It contains Cx process and application information for all Cx team members as well as over 50 checklists that are available on the ASHRAE cloud.

4. USDOE/NIBS CWCC Program and Certifications – Commissioning Provider

a. DOE completed program development in 2015. It licenses organizations that meet the ISO 17024 and DOE requirements to certify individuals. ACG, ASHRAE, and BCxA have been ANSI certified and approved by DOE.

b. AEE and EMA are now approved for other non-commissioning certifications.

c. DOE program has <u>certification</u> and <u>certificate</u> programs.

d. A training program for building enclosure commissioning is being developed by IIBEC. The plan is for that program to be available later in 2022. It will include processes to tie the BECx process into the overall Cx process.

5. National Institute of Building Science (NIBS)
   a. A centralized resource library for commissioning and other documentation is available on the NIBS program and website as "Whole Building Design Guide".
   b. These commissioning sections have been updated and expanded from four to eight chapters including basic new building commissioning process and definitions, Cx team responsibilities, OPR development, documentation, existing building Cx, On-going Cx, emerging issues, and additional Cx resources.
   c. These chapters will be available on the WBDG website probably by mid-2022.

6. International Standards Organization (ISO)
   a. An ISO standard is being developed (based on Standard 202) for the application of Commissioning starting at the planning and design phase. It is titled 'Building Commissioning Process Planning – Part 1: New Buildings". Development time is anticipated to be three years. This development is being conducted by ASHRAE TG 205 and the ISO TG 205 Work Group.
   b. An ISO standard has been published that covers the building enclosure commissioning process and the related risk assessment procedure for selecting the level of commissioning.

7. International Code Council (ICC)
   a. The 2015, 2018 and 2021 versions of International Energy Conservation Code (IECC) and International Green Construction Code (IGCC) require the performance of HVAC test and balance, and commissioning. They require the application of "industry accepted" commissioning process. The 2019 version of ASHRAE 90.1 is very similar to the commissioning requirements in ASHRAE 189.1. IGCC-2021 is based on ASHRAE Standard 189.1-2020 and has a Cx section that basically conforms to Standard 202 and coordinates with IECC. The 2021 IGCC is based on the ASHRAE 189.1-2020 and the TAB and commissioning requirements have not changed substantially from the previous codes.
   b. ICC Guideline G-4 – *Guideline for Commissioning*, has been revised by ICC and industry committee and has been republished in 2018 and conforms to the STD 202

process. It is intended to assist the building officials in the application and enforcement of commissioning.

    c. ICC has instituted a certification program for Green Code Reviewers and inspectors.

8. *ASHRAE Standard 189.1 – Standard for the Design of High-Performance Green Buildings*

    a. ICC IGCC-2021 utilizes ASHRAE 189.1-2020 for requirements except for IGCC administration chapter One.

    b. Cx requirements have been included in 189.1-2020 to follow Standard 202 process requirements and coordinate with other codes.

9. CAL Green – Title 24

    a. Includes Commissioning requirements

    b. Has developed checklists for new construction.

10. Retro-Commissioning and City Ordinances

    a. Several cities including: Seattle, New York, Washington DC, Chicago, Atlanta, San Francisco, Los Angeles and others have passed ordinances mandating energy auditing and retro-commissioning or "Building Tune Up" for many of their buildings.

    b. Many of these programs utilize ASHRAE Standard 211-2018, Standard for Commercial Building Energy Audits, as the energy audit process. The DOE website has extensive process and checklist information already available for the audit process. The DOE website does not currently have any commissioning information in this subject area.

    c. The USDOE and PNNL lab are currently working with several cities and ASHRAE to develop a commissioning process and instructions to utilize with the building audit and Tune Up process.

11. Commissioning Industry Interface with Existing Processes and Documents and New Developments

    a. Documents and organizations that utilize or relate to commissioning need representation and participation from the commissioning industry. This will facilitate the correct utilization of the commissioning process. The design and regulation documents often include other ASHRAE and other organization standards that relate to facility design and construction.

b. Several of the sustainability programs such as LEED, Green Globes, WELL Building, FITWELL, and others have elements of commissioning included. These are under nearly continuous revision and need upgrades to the testing and commissioning processes.

c. New developments such as the Sustainability, Working Environment Conditions, and Resilience movements are also examples for the need for commissioning input and representation.