Update

Codes and Standards & Fire Alarm Systems

Underwriters Laboratories of Canada
Alan Cavers, Engineering Manager

October 30, 3019 Ottawa
Agenda

• Building and Fire Code Update
• National Building and Fire Code
• Ontario Building and Fire Code
• Standards Update
• How and When to apply?
Where does this Start?

- 2015 NBC and NFC Released Early 2016
- Interim 2019 – Some emergency amendments
- New Code Cycle to be completed for 2020 Code
- Standing Committees are appointed- Completed Work
- Task Groups are now disbanded- 2019 to regroup

- Task Group on Fire Alarm Systems –ongoing agenda

- Completion and Review of Standards –2019
Standards Work Completion for 2020 Code

- CAN/ULC- S537- Verification of Fire Alarm Systems – Aug. 2019
- CAN/ULC-S561- Installation and Services for Fire Signal Receiving Centres and Systems- Nov-Dec. 2019
CAN/ULC – S524

• Major Editorial Changes

• Glossary of terms – Definitions Consistency all S500 series Standards

• Takes into consideration of new technology

• Wireless Devices

• Changes to forced down to S537 and S536
Glossary Changes
• Consistency with all S500 Series Standards

Body of Standard
• Verification Forms are in the body of the Standard- Enforcement
• Requirement for Documents to be kept onsite
• Section on Wireless Devices
CAN/ULC-S537 – Notable Changes

• Response times- First input operation 5 sec. down from 10 sec.

• Verification Report shall be kept on site for the life of the fire alarm system

• Improved clauses on Fire Monitoring – Clarification

• Battery Testing – Capacity testing (5 ohm - 5 minute test)

• Section added on Carbon Monoxide Testing

• Complete review and edit of all Forms - Flow and Correctness

• Clarification on Fire Alarm Zone- NBC Fire Alarm Zone – Isolation Modules

• Clarification on Deficiencies and Recommendations
CAN/ULC-S536- Testing of Fire Alarm Systems

- **Glossary Changes**
- Consistency with all S500 Series Standards

- **Body Of Standard**
- *Annual Inspection & Testing Forms are in the body of the Standard- Enforcement*
- Introduction of Suite Isolation Modules
- Care Occupancy
CAN/ULC-S536 – Notable Changes

• Response times- First input operation 5 sec. down from 10 sec.

• Annual Report shall be retained on site. Locked Cabinets

• Improved clauses on Fire Monitoring – Clarification

• Battery Testing – Capacity testing (5 ohm - 5 minute test)

• Section added on Carbon Monoxide Testing

• Complete review and edit of all Forms - Flow and Correctness

• Clarification on Fire Alarm Zone- NBC Fire Alarm Zone – Isolation Modules

• Wireless Devices – Testing and Maintenance

Clarification on Deficiencies and Recommendations
CAN/ULC-S561 – Fire Alarm Monitoring

- Glossary Changes consistent with S500 Series Standards

- Relaxation on the requirement for a 2hr fire separation protecting the Signal Receiving Centre- 1 hr separation in a sprinklered building

- Redundant SRC’s and Hosted Central Station – Options

- Remote Access to put systems on test and accessing Testing

- Managed Facilitiy Voice Networks (MFVN) – allowing digital phone service for passive communications - 6 hour testing vs Daily test.
What Are Some Things You Need to Know?

• No Fire Alarm Verification

• Signals need to be transmitted to the Fire Signal

• Receiving Centre (FSRC) within 60 seconds.

• FSRC shall contact the fire department in 30 seconds.

• Trouble and Supervisory Signals – Contact customer within 5 minutes.

• Communication Troubles- Contact Customer within 5 Minutes.
CAN/ULC-S1001 INTEGRATED SYSTEMS TESTING OF FIRE PROTECTION AND LIFE SAFETY SYSTEMS

Reaffirmed 2018
CAN/ULC-S1001-11

Adopted in 2015

National Building Code and Fire Code
How will CAN/ULC-S1001 affect you?

Ontario Building Code – Effective January 1, 2020

Where life safety and fire protection systems are installed to comply with the provisions of this Code or the Fire Code the commissioning of these integrated systems must be performed as a whole to ensure the proper operation and inter-relationship between the systems.
Scope:

- Standard prescribes the methodology for verifying and documenting that all interconnections between systems provided for fire protection and life safety functions are installed and operating in conformance with their design criteria.

- Examples: Fire alarm, emergency generator, fire pump, elevators, audio/visual systems, lighting control systems ……
Scope cont’d:

• The Standard prescribes the following:
  • Integrated Systems Testing
    • Qualifications, Process, Requirements and documentation
  • Periodic Integrated Systems Testing
  • Retro-Integrated Systems Testing- Existing
  • Integrated Systems Testing for Modification
Systems Tested

Fire Alarm Systems including monitoring
Mass Notification Systems
Emergency Generators
Fire Pumps
Elevators
Sprinkler and Standpipe systems
Water Supplies
Hold open devices
Smoke Control Systems- Emergency pressurization systems
Fixed & Cooking Equipment Fire Suppression Systems
INTEGRATED SYSTEMS TESTING
QUALIFICATIONS

• Integrated Systems Testing Participants
  • Person(s) shall be knowledgeable and experienced in design, installation and operation of their system(s)

• Integrated Testing Coordinator
  • Shall be knowledgeable…. in the fire protection and life safety functions of building systems
  • Codes and Standards, how systems are designed to operate
How does this affect you?

• All disciplines are required to submit documentation to the **Integrated Testing Coordinator**.

• Integration of systems in the building that are tied to the fire alarm system will be required to work as a whole – not independently.

• Records of compliance are required as proof of your work.

• Verification of Fire Alarm System will include the integration to other building systems.
PERIODIC & RETRO-INTEGRATED SYSTEMS TESTING

Only applies WHERE mandated by local Building and Fire Codes

• PERIODIC INTEGRATED SYSTEMS TESTING
  • 1 year after initial, subsequent tests shall not exceed 5 years

• RETRO-INTEGRATED SYSTEMS TESTING
  • Is existing and has not undergone an initial integrated test
  • Subsequent tests shall not exceed 5 years

• Modifications
  • Systems that have been modified or other systems affected by the modification of building.
Standards - General
How can you get involved?

Commenting on Standards

• Request from ULC Standards access to these standards for review and comment- Access granted through the portal (CSDS)

• Automated notification when to comment

• Request reply for your comments

• New Standards- Always looking for help
What Version of Standard Applies

Questions

• How this applies to you?

• Why are the Standards not in sync with the applicable Codes?

• Who regulates this?

• Why can’t I apply the latest Standard to an older system?

• Can there be exceptions?
What does this all mean?

1.) How to apply an edition of the Standard or Code.

2.) Date of the Code or Standard.

3.) What about new installations?

4.) What about existing installations?

5.) Local Authorities – How do they apply the rules?

6.) Can we help?

7.) What about partnerships instead of confrontation?
# How To Apply Standards
## When and Where? National

|----------|---------|---------|----------|----------|----------|----------|
# How To Apply Standards When and Where? Ontario

|----------|----------|----------|----------|----------|------------|------------|
Questions
Contact Information

THANK YOU

Contact Information
Alan Cavers, Engineering Manager,
Phone- 1-416-697-6762
E-mail alan.n.cavers@ul.com