BULLETIN 2020-006-BU/EL – Attachment ***Revised February 19,2020***

APPENDIX C
VERIFICATION OF FIRE ALARM SYSTEMS

CAN/ULC S537-13 – APPENDIX "C" (INFORMATIVE) – (FAS) FIRE ALARM SYSTEM VERIFICATION RECORDS
(Amended for use in the City of Vancouver) (Reference: Subsection 4.1-Note, Clause 4.1.7, 4.2.1, and 4.2.2)

C1. FIRE ALARM SYSTEM VERIFICATION REPORT (Reference: Clause 4.1.6 and 4.2.2)

Building Name & Address: _____ Date: _____

New FAS: ☐ Existing FAS (Note 1): ☐ Releasing FAS: ☐

System Manufacturer: _____ Model Number: _____

Electrical Permit #: _____ Building Permit #: _____

		Yes	No	N/A
A	System provides single-stage operation.	☐	☐	
B	System provides two-stage operation.	☐	☐	
C	The entire fire alarm system has been verified in accordance with CAN/ULC-S537, Standard for Verification of Fire Alarm Systems.	☐	☐	
D	This is a partial verification for a partial occupancy (see scope of Electrical Permit and Note 1).	☐	☐	☐
E	Components of the existing fire alarm system have been modified or replaced with components from a different manufacturer and are compatible with the existing fire alarm system components (ULC Test Report must be attached).	☐	☐	☐
F	This is a partial verification for a *Fire Alarm System* that has been replaced in stages (see Note 1).	☐	☐	☐
G	This is a verification of a portion of an existing *Fire Alarm System* verified in accordance with Section 7, System Modifications of CAN/ULC-S537 (see Note 1 below and Note 3 in Section C5.13).	☐	☐	☐
H	Installed in accordance with the design and CAN/ULC-S524, Standard for the Installation of Fire Alarm Systems.	☐	☐	☐
I	The *Fire Alarm System* documentation is on site and includes a description of the system.	☐	☐	☐
J	The *Fire Alarm System* is fully functional without deficiencies (see Note 3).	☐	☐	☐
K	The *Fire Alarm System* is connected to an acceptable ULC Listed fire signal receiving centre via a supervised circuit of a ULC Listed signal transmitting unit approved for the purpose. If "Yes": - The name and location of the ULC Listed Fire Signal Receiving Company is: _____ - A copy of the ULC "Fire Protective Signalling Service Certificate No.: _____ issued for the address above is appended to this Verification Record.	☐	☐	☐
L	Comments: _____			
M	A copy of this report has been given to: _____ (the owner or owner's representative for this building).			

CERTIFICATION

This certifies that the information contained in this Fire Alarm System Verification Report (which incorporates the attached _____ pages) is correct and complete. The system and equipment described here-in was tested/inspected in conformance with CAN/ULC-S537-13 by a qualified technician. The equipment was left in an operational condition except as noted here-in. A copy of this report must be maintained on the premises for examination by the Fire Marshal, Building Inspector, or other *Authority Having Jurisdiction* at their request for the life of the Fire Alarm System.

Printed Name and Signature of Qualified Person(s) conducting the Verification.	Company Information	

NOTES (continued in C5.3 - Interconnection to Fire Signal Receiving Centre & C6.2 - Individual Device Test Record)**:**

1. Please, elaborate on the extent of Verification of the existing FAS: _____

2. The identified deficiencies relate to:
   (a) the existing portion of the FAS which is not covered by the scope of work under Electrical Permit #: _____ **Yes** ☐ **No** ☐
   (b) the newly installed FAS (or modified/added portion of the existing FAS) **Yes** ☐ **No** ☐

Date:			
Building Name:		**Address:**	

C2. Documentation

		Yes	No	N/A
A	Instructions for resetting the system and silencing alarm signals.	☐	☐	☐
B	Instructions for silencing the trouble signal and action to be taken when the trouble signal sounds.	☐	☐	☐
C	Description of the function of each operating control and indicator on the fire alarm control unit.	☐	☐	☐
D	Description of the area or fire zone protected by each alarm detection circuit (this may be in the form of a list or plan drawing).	☐	☐	☐
E	Description of alarm signal operation.	☐	☐	☐
F	Description of ancillary equipment controlled by the fire alarm system.	☐	☐	☐
G	In systems that provide logical control of a smoke control system, documentation is on site and includes a sequence of operation of the smoke control system. Smoke control installed in accordance with Measure:	☐	☐	☐
H	Building diagrams are on site that clearly indicate the type and location of all smoke control equipment (fans, dampers, etc.).	☐	☐	☐
Recommended Additional Documentation (not mandated by the Standard):		**Yes**	**No**	**N/A**
	Additional documentation relating to smoke control measures in the building is appended to this report.	☐	☐	☐
	Fire Safety Plan documentation is on site.	☐	☐	
	Instructions to Occupants/Evacuation Floor Plans are posted.	☐	☐	

There is a total of:

_____ remotely installed amplifiers in this FAS.
_____ supervised power supplies in this FAS.
_____ remote sequential display units in this FAS.
_____ remote annunciators in this FAS.
_____ remote trouble units in this FAS.
_____ stand-by batteries in this FAS.
_____ remote booster/power supplies in this FAS.

List all locations where remote booster/power supplies, batteries & amplifiers are installed:

Date:			
Building Name:		**Address:**	

"Yes" - Tested correctly "No" - Did not test correctly (NO answers are typically detailed in "Comments/Remarks")
"NA" = Not applicable

C3. Field Device and Related Circuits – Test and Inspection				
		Yes	No	N/A
A	Correct field termination and wiring size.	☐	☐	☐
B	Correct circuit polarities.	☐	☐	☐
C	An open circuit fault on a conventional device circuit causes a trouble signal.	☐	☐	☐
D	Removal of any active or supporting field device circuit causes a trouble signal.	☐	☐	☐
E	One contact device and one non-contact device tested for operation and annunciation at the control unit or transponder, when using a field verifying device.	☐	☐	☐
F	Class "A" circuits serving conventional field devices tested for the capability of providing an alarm signal on each side of an open circuit fault connection at the electrically most remote point in the circuit.	☐	☐	☐
G	Ground fault indications occur when tested at the electrically furthest field device, and do not result in normal to off-normal status change conditions.	☐	☐	☐
H	Field device at the electrically furthest point from the power source (in every circuit) receives rated power in accordance with the manufacturer's specifications.	☐	☐	☐
I	Replaceable over-current devices are of the correct rating.	☐	☐	☐
J	Where a power buss circuit serves more than one fire alarm zone, a single fault (open circuit fault, short circuit fault or ground fault) on the power circuit does not prevent the normal operation of input or output field devices in more than one fire alarm zone.	☐	☐	☐
K	Conductor type and wire gauge are in accordance with the equipment manufacturer's installation wiring requirements at all system termination points.	☐	☐	☐
L	Confirm that where multiple strand optical fibre cable used with a fire alarm system is not dedicated to the fire alarm system, the fire alarm system shall continue to function as required despite impairment to other systems which may share the cable.	☐	☐	☐
M	Where power isolation modules are installed in a power distribution riser serving field devices, wiring shall be shorted on the isolated side, annunciation of the fault confirmed, and then a device on the source side shall be operated, and activation confirmed at the control unit or transponder.	☐	☐	☐
N	Where a signal circuit serves more than one residential suite, a wire-to-wire short circuit fault shall be imposed within each suite in normal (supervisory-non-alarm) and alarm conditions. In all cases the wire-to-wire short circuit fault shall not interfere with the ability of devices in other dwelling units, public corridors, or suites to sound an alarm.	☐	☐	☐

Date:			
Building Name:		**Address:**	

No Data Communication Link is part of this system. ☐ (This Section is Not Applicable)

C4. Data Communication Link Testing

Control Unit/Transponder Field Location:
Control Unit/Transponder Identification:
DCL Identification:

		Yes	No	N/A
A	Each system abnormal condition specified in Table 1 – Abnormal System Conditions, tested for each data communication link at the control unit or transponder.	☐	☐	☐
B	Tests for alarm and trouble received under a single ground fault condition conducted on each conductor of that data communication link independently.	☐	☐	☐
C	Each conductor in a data communication link, Class A (DCLA) tested for the capability of providing an alarm signal on each side of a single open circuit fault condition.	☐	☐	☐
D	Where a data communication link serves devices on more than one floor area, impose a wire-to-wire short circuit fault within each floor area and confirm receipt of trouble and alarm condition from another floor area.	☐	☐	☐
E	Where fault isolation modules are installed in data communication links serving field devices, wiring shorted on the isolated side, annunciation of the fault confirmed, and then a device on the source side operated, and activation confirmed at the control unit or transponder.	☐	☐	☐
F	Where fault isolation in data communication links is provided between control units or transponders, the field wiring shorted between each pair of control units or transponders, in turn, annunciation of the fault confirmed and operation outside the shorted section is confirmed.	☐	☐	☐

Control Unit/Transponder Field Location:
Control Unit/Transponder Identification:
DCL Identification:

		Yes	No	N/A
A	Each system abnormal condition specified in Table 1 – Abnormal System Conditions, tested for each data communication link at the control unit or transponder.	☐	☐	☐
B	Tests for alarm and trouble received under a single ground fault condition conducted on each conductor of that data communication link independently.	☐	☐	☐
C	Each conductor in a data communication link, Class A (DCLA) tested for the capability of providing an alarm signal on each side of a single open circuit fault condition.	☐	☐	☐
D	Where a data communication link serves devices on more than one floor area, impose a wire-to-wire short circuit fault within each floor area and confirm receipt of trouble and alarm condition from another floor area.	☐	☐	☐
E	Where fault isolation modules are installed in data communication links serving field devices, wiring shorted on the isolated side, annunciation of the fault confirmed, and then a device on the source side operated, and activation confirmed at the control unit or transponder.	☐	☐	☐
F	Where fault isolation in data communication links is provided between control units or transponders, the field wiring shorted between each pair of control units or transponders, in turn, annunciation of the fault confirmed and operation outside the shorted section is confirmed.	☐	☐	☐

Date:			
Building Name:		**Address:**	

C5.1 Control Unit or Transponder Tests
(Reference Clause 5.1.1)

Control Unit/Transponder Field Location:
Control Unit/Transponder Identification:

		Yes	No	N/A
A	Power 'on' visual indicator operates.	☐	☐	☐
B	Common visual trouble signal operates.	☐	☐	☐
C	Common audible trouble signal operates.	☐	☐	☐
D	Trouble signal silence switch operates.	☐	☐	☐
E	Main Power supply failure trouble signal operates.	☐	☐	☐
F	Ground fault tested on positive and negative initiates trouble signal.	☐	☐	☐
G	Alert signal operates.	☐	☐	☐
H	Alarm signal operates.	☐	☐	☐
I	Automatic transfer from alert signal to alarm signal operates. Time:	☐	☐	☐
J	Manual transfer from alert signal to alarm signal.	☐	☐	☐
K	Automatic transfer from alert to alarm signal cancel (acknowledge) operates on a two stage system.	☐	☐	☐
L	Alarm signal silence inhibit function operates.	☐	☐	☐
M	Alarm signal manual silence operates.	☐	☐	☐
N	Alarm signal silence visual indication operates	☐	☐	☐
O	Alarm signal and visible signal devices, when silenced, automatically reinitiate upon subsequent alarm. ☐ In same zone ☐ In other zone/circuit	☐	☐	☐
P	Alarm signal silence automatic cut-out timer. Time:	☐	☐	☐
Q	Audible, visual, alert, and alarm signals programmed and operate as per manufacturer's design and specification.	☐	☐	☐
R	Input circuit alarm and supervisory operation including audible and visual indicator operates.	☐	☐	☐
S	Input circuit supervision fault causes a trouble indication.	☐	☐	☐
T	Output circuit alarm indicators operate.	☐	☐	☐
U	Output circuit supervision fault causes a trouble indication.	☐	☐	☐
V	Visual indicator test (lamp test) operates.	☐	☐	☐
W	Coded signal sequence operate not less than the required number of times and the correct alarm signal thereafter.	☐	☐	☐
X	Coded signal sequences are not interrupted by subsequent alarms.	☐	☐	☐
Y	Ancillary device control circuit is rated for the intended purpose.	☐	☐	☐
Z	Ancillary device by-pass results in trouble signal.	☐	☐	☐
AA	Input circuit to output circuit operation including ancillary device circuits (refer to Appendix C5.12, Ancillary Device Circuit Test), for correct program operation as per design and specification.	☐	☐	☐
BB	Fire alarm reset function operates.	☐	☐	☐
CC	Main power to emergency power supply transfer operates.	☐	☐	☐
DD	Control unit or transponder enclosure bonded to ground.	☐	☐	☐
EE	Status change confirmation feature (smoke detectors only) verified.	☐	☐	☐
Recommended Additional Testing (not mandated by the Standard):		**Yes**	**No**	**N/A**
Alarm, trouble, & supervisory relays function correctly.		☐	☐	☐

Is an AC disconnecting switch installed? YES ☐ NO ☐
(ULC CAN4-S524 restricts this, but some AHJ's will accept it.)
NOTE: A "YES" answer here must be noted in the "Comments/Remarks" section of this report.

Date:			
Building Name:		**Address:**	

No Voice Communication Equipment is installed in this system. ☐ (This Section is Not Applicable)

C5.2 Voice Communication Test

Location:
Identification:

		Yes	No	N/A
A	Power 'on' visual indicator operates.	☐	☐	☐
B	Common visual trouble signal operates.	☐	☐	☐
C	Common audible trouble signal operates.	☐	☐	☐
D	Trouble signal silence switch operates.	☐	☐	☐
E	All-call voice paging, including visual indicator, operates.	☐	☐	☐
F	Output circuits for selective voice paging, including visual indication, operates.	☐	☐	☐
G	Output circuits for selective voice paging trouble operation, including visual indication, operates.	☐	☐	☐
H	Microphone, including press to talk switch, operates.	☐	☐	☐
I	Operation of voice paging does not interfere with initial inhibit time of alert signal and alarm signal.	☐	☐	☐
J	All-call voice paging operates (on emergency power supply).	☐	☐	☐
K	Upon failure of one amplifier, system automatically transfers to backup amplifier(s).	☐	☐	☐
L	Circuits for emergency telephone call-in operation, including audible and visual indication operates.	☐	☐	☐
M	Circuits for emergency telephones for operation, including two-way voice communication, operates.	☐	☐	☐
N	Circuits for emergency telephone trouble operation, including visual indication, operates.	☐	☐	☐
O	Emergency telephone verbal communication operates.	☐	☐	☐
P	Emergency telephone operable or in-use tone at handset operates.	☐	☐	☐
Q	While in standby mode, voice communication busses used for paging, alert signal, alarm signal, and emergency telephone communication circuits, an open circuit fault, or short circuit fault, or operation of an overcurrent protective device provided for the purpose, shall result in a specific trouble indication specific to the faulty buss.	☐	☐	☐

Recommended Additional Testing (not mandated by the Standard):	Yes	No	N/A
Visual indicator test (lamp test) operates.	☐	☐	☐
Main power to emergency power supply transfer operates.	☐	☐	☐
Communication control enclosure bonded to ground.	☐	☐	☐
Trouble signal on the voice communication system results in common trouble signal on the fire alarm system.	☐	☐	☐
Dead-front panel(s) in place & as per manufacturer's specification.	☐	☐	☐

Date:			
Building Name:		**Address:**	

C5.3 Required System Response Times				
Control Unit/Transponder Field Location:				
Control Unit/Transponder Identification:				
		Yes	**No**	**N/A**
A	Audible signal devices and visible signal devices operated within ten seconds and; subsequent input operated within ten seconds.	☐ ☐	☐ ☐	
B	Remote connection operated within ten seconds.	☐	☐	☐
C	Release device start of sequence operated within ten seconds.	☐	☐	☐
D	Required Annunciation operated within ten seconds and; subsequent input operation within ten seconds.	☐ ☐	☐ ☐	
E	Required central alarm and control facility operated within ten seconds and; subsequent input operation within ten seconds.	☐ ☐	☐ ☐	☐ ☐
F	Ancillary circuits operated within ten seconds.	☐	☐	☐
Additional Testing for Installations Requiring Compliance with CAN/ULC-S524-14				
Audible signal devices and visible signal devices within the same manually initiated fire alarm zone operated within five seconds		☐	☐	☐
Trouble signal activation annunciates within ninety seconds and; subsequent trouble input annunciates within ninety seconds		☐ ☐	☐ ☐	☐ ☐
Water flow devices activation operated within ten seconds and; subsequent activation operated within ten seconds.		☐ ☐	☐ ☐	☐ ☐

C5.3 Required System Response Times				
Control Unit/Transponder Field Location:				
Control Unit/Transponder Identification:				
		Yes	**No**	**N/A**
A	Audible signal devices and visible signal devices operated within ten seconds and; subsequent input operated within ten seconds.	☐ ☐	☐ ☐	
B	Remote connection operated within ten seconds.	☐	☐	☐
C	Release device start of sequence operated within ten seconds.	☐	☐	☐
D	Required Annunciation operated within ten seconds and; subsequent input operation within ten seconds.	☐ ☐	☐ ☐	
E	Required central alarm and control facility operated within ten seconds and; subsequent input operation within ten seconds.	☐ ☐	☐ ☐	☐ ☐
F	Ancillary circuits operated within ten seconds.	☐	☐	☐
Additional Testing for Installations Requiring Compliance with CAN/ULC-S524-14				
Audible signal devices and visible signal devices within the same manually initiated fire alarm zone operated within five seconds		☐	☐	☐
Trouble signal activation annunciates within ninety seconds and; subsequent trouble input annunciates within ninety seconds		☐ ☐	☐ ☐	☐ ☐
Water flow devices activation operated within ten seconds and; subsequent activation operated within ten seconds.		☐ ☐	☐ ☐	☐ ☐

Date:			
Building Name:		**Address:**	

C5.4 Control Unit or Transponder Inspection

Control Unit/Transponder Field Location: _____

Control Unit/Transponder Identification: _____

		Yes	No	N/A
A	Input circuit designations correctly identified in relation to connected field devices.	☐	☐	☐
B	Output circuit designations correctly identified in relation to connected field devices.	☐	☐	☐
C	Correct designations for common control functions and indicators.	☐	☐	☐
D	Plug-in components and modules securely in place.	☐	☐	☐
E	Plug-in cables securely in place.	☐	☐	☐
F	Record the date, revision and version of firmware: Date: _____ Revision: _____ Version: _____ Record the date, revision and version of the program software: Date: _____ Revision: _____ Version: _____			
G	Control unit/transponder is clean and free of dust and dirt.	☐	☐	☐
H	Fuses in accordance with the manufacturer's specification.	☐	☐	☐
I	Control unit/transponder lock is functional.	☐	☐	☐
J	Termination points for wiring to field devices secure.	☐	☐	☐
K	Control unit/transponder power disconnects in accordance with C22.1, Safety Standard for Electrical Installations, Canadian Electrical Code, Part 1.	☐	☐	☐
L	Field wiring entry points for the various circuits and circuit separations are in accordance with the manufacturer's installation instructions.	☐	☐	☐
M	Main power supply feed wiring is in accordance with the manufacturer's specifications.	☐	☐	☐
N	Verify control units/transponders with stand alone capability serve the same area for both input circuits and output circuits.	☐	☐	☐
O	Control units or transponders which operate with stand alone capability have signal silence, reset, and trouble silence switches with visual indications, degraded mode capability and stand alone capability indicators.	☐	☐	☐
P	Each control unit/transponder has been furnished with installation, operating and maintenance instructions.	☐	☐	☐
Q	Control unit/transponder visual indicators comply with Table 3 – Visual Indicators Colour Code.	☐	☐	☐
Recommended Additional Visual Inspection (not mandated by the Standard):		**Yes**	**No**	**N/A**
Dead-front panel(s) in place & as per manufacturer's specification.		☐	☐	☐

Date:			
Building Name:		**Address:**	

This system does not qualify as a Large-Scale Network System ☐ (This Section is Not Applicable)

C5.5 Large-Scale Network Systems

Control Unit/Transponder Field Location: _____

Control Unit/Transponder Identification: _____

		Yes	No	N/A
A	Verify control units/transponders serve the same area for both input circuits and output circuits.	☐	☐	☐
B	Verify control units/transponders with stand-alone capability have signal silence, reset, and trouble silence switches with visual indicators, degraded mode capability and stand-alone capability indicators.	☐	☐	☐
C	Confirm that between any nodes a single open circuit fault, wire-to-wire short circuit fault, or ground fault on the network results in a trouble signal at each node and continued alarm receipt capability at each node under these conditions.	☐	☐	☐
D	To test stand-alone capability, create a condition of data communication link failure, and confirm each control unit or transponder is capable of receiving an alarm initiation and provides output operation in the area as served by the control unit or transponder in degraded mode.	☐	☐	☐
E	To test degraded mode capability, create a condition of data communication link failure in two separate locations creating two network segments, and confirm each segment of the network has the following operation:			
	(i) Operate the alarm signals in accordance with the system operating sequence;	☐	☐	☐
	(ii) Maintain synchronization of control units or transponders for alert signals and alarm signals;	☐	☐	☐
	(iii) Operate local relays in control units or transponders connected to ancillary devices as required;	☐	☐	☐
	(iv) Confirm the operation of acknowledge, signal silence, reset and trouble silence switches with visual indicators, degraded mode capability and stand-alone capability indicators are functional for each network segment.	☐	☐	☐

C5.5 Large Scale Network Systems

Control Unit/Transponder Field Location: _____

Control Unit/Transponder Identification: _____

		Yes	No	N/A
A	Verify control units/transponders serve the same area for both input circuits and output circuits.	☐	☐	☐
B	Verify control units/transponders with stand-alone capability have signal silence, reset, and trouble silence switches with visual indicators, degraded mode capability and stand-alone capability indicators.	☐	☐	☐
C	Confirm that between any nodes a single open circuit fault, wire-to-wire short circuit fault, or ground fault on the network results in a trouble signal at each node and continued alarm receipt capability at each node under these conditions.	☐	☐	☐
D	To test stand-alone capability, create a condition of data communication link failure, and confirm each control unit or transponder is capable of receiving an alarm initiation and provides output operation in the area as served by the control unit or transponder in degraded mode.	☐	☐	☐
E	To test degraded mode capability, create a condition of data communication link failure in two separate locations creating two network segments, and confirm each segment of the network has the following operation:			
	(i) Operate the alarm signals in accordance with the system operating sequence;	☐	☐	☐
	(ii) Maintain synchronization of control units or transponders for alert signals and alarm signals;	☐	☐	☐
	(iii) Operate local relays in control units or transponders connected to ancillary devices as required;	☐	☐	☐
	(iv) Confirm the operation of acknowledge, signal silence, reset and trouble silence switches with visual indicators, degraded mode capability and stand-alone capability indicators are functional for each network segment.	☐	☐	☐

Date:			
Building Name:		**Address:**	

C5.6 Power Supply Inspection

Power Supply Field Location:	
Power Supply Identification:	
Circuit Disconnect Means Location:	
Circuit Panel/Breaker Identification:	

		Yes	No	N/A
A	Conforms with the requirements of CAN/ULC-S524, Standard for the Installation of Fire Alarm Systems; and C22.1, Safety Standard for Electrical Installations, Canadian Electrical Code, Part 1, Section 32.	☐	☐	☐
B	Fused in accordance with the manufacturer's marked rating of the system.	☐	☐	☐
C	Equipped with the identified disconnect means.	☐	☐	☐
D	Adequate to meet the requirements of the system.	☐	☐	☐
E	Power for ancillary devices is taken from a source separate from the fire alarm system control unit or transponder power supply.	☐	☐	☐
F	Power for ancillary devices is taken from the control unit or transponder that is designed to provide such power.	☐	☐	☐
G	Ancillary devices, which are powered from the control unit or transponder, are recorded.	☐	☐	☐
Recommended Additional Visual Inspection (not mandated by the Standard):		**Yes**	**No**	**N/A**
Dead-front panel(s) in place & as per manufacturer's specification.		☐	☐	☐
Circuit disconnect means painted **RED** and locked "on".		☐	☐	☐
Power supply cabinet (where applicable) is clean and free of dust and dirt.		☐	☐	☐

C5.7 Emergency Power Supply Test And Inspection

Emergency Power Supply Field Location:	
Emergency Power Supply Identification:	
Battery Type (as installed):	☐ Sealed Lead Acid ☐ Ni-Cad ☐ Lithium-Ion ☐ Wet Lead
Battery Capacity (as installed):	AH
Required Building Code Alarm Operation:	☐ 30 minutes ☐ 60 minutes ☐ 120 minutes

				Yes	No	N/A
A	Correct battery type as recommended by the manufacturer.			☐	☐	
B	Correct battery rating as determined by battery calculations based on full system load.			☐	☐	☐
C	Battery voltage (main power "on"):		VDC			
D	Battery voltage – main power "off" – FAS in supervisory condition:		VDC			
	Battery current - main power "off" – FAS in supervisory condition:		mA			
E	Battery voltage – main power "off" – FAS in full load ALARM:		VDC			
	Battery current – main power "off" – FAS in full load ALARM:		A			
F	Battery charging current (main power "on"):		mA			
G	Inspected for physical damage.			☐	☐	☐
H	Terminals cleaned and lubricated.			☐	☐	☐
I	Terminals clamped tightly.			☐	☐	☐
J	Correct electrolyte level.			☐	☐	☐
K	Specific gravity of the electrolyte is within the battery manufacturer's specifications.			☐	☐	☐
L	Inspected for electrolyte leakage.			☐	☐	☐
M	Adequately ventilated.			☐	☐	☐
N	Record manufacturer's date code or in-service date:					
O	Disconnection causes trouble signal.			☐	☐	☐
P	Indicate type of tests performed on a fully charged battery:					
	(i) Required supervisory load for 24 h followed by the required full load operation			☐	☐	☐
	(ii) Silent test using load resistor method for full duration test (refer to Appendix D1)			☐	☐	☐
	(iii) Silent accelerated test (refer to Appendix D2)			☐	☐	☐
Q	Record calculated battery capacity (refer to Appendix D3.1-C).		AH			
R	Record the battery terminal voltage after tests are completed.		VDC			
S	Battery voltage not less than 85% of its rated capacity after tests completed.			☐	☐	☐
T	Generator provides power to the AC circuit serving the fire alarm system.			☐	☐	☐
U	Trouble condition at the emergency generator results in an audible common trouble signal and a visual indication at the required annunciator.			☐	☐	☐
Recommended Additional Inspection (not mandated by the Standard):						
Generator running indication is provided at the required annunciator.				☐	☐	☐
Low Fuel Level trouble results in an audible trouble signal and a visual indication at the required annunciator?				☐	☐	☐

Generator fueled by: ☐ Diesel ☐ Natural Gas ☐ Other:			
Fuel Level:	% of full capacity	Estimated run time:	Hours
Low Fuel Level Set-point:	☐ % of full capacity ☐ Gallons ☐ Litres		

Date:			
Building Name:		**Address:**	

No Annunciator and Display & Control Centre is installed in this system. ☐ (This Section is Not Applicable)

C5.8 ANNUNCIATOR AND DISPLAY AND CONTROL CENTRE TEST AND INSPECTION

Annunciator Location:
Annunciator Identification:

		Yes	No	N/A
A	Power "on" indicator operates.	☐	☐	☐
B	Individual alarm and supervisory input zone clearly indicated and separately designated.	☐	☐	☐
C	Individual alarm and supervisory input zone designation labels are properly identified.	☐	☐	☐
D	Where active and supporting field devices are utilized, device labels correspond with actual field location.	☐	☐	☐
E	Common trouble signal operates.	☐	☐	☐
F	Visual indicator test (lamp test) operates.	☐	☐	☐
G	Input wiring from control unit or transponder is supervised and of the correct type and gauge in accordance with the equipment manufacturer's installation wiring requirements.	☐	☐	☐
H	Alarm signal silence visual indicator operates.	☐	☐	☐
I	Switches for ancillary functions operate as per design and specification.	☐	☐	☐
J	Ancillary functions visual indicators operates.	☐	☐	☐
K	Manual activation of alarm signal and indication operates.	☐	☐	☐
L	Displays are visible in the installed location.	☐	☐	☐
M	Operates on emergency power.	☐	☐	☐
N	Visual indicators comply with Table 3 – Visual indicators Colour Code	☐	☐	☐
O	Multi-line sequential display operates as per Appendix C5.9 (Annunciators or Sequential Displays), where utilized.	☐	☐	☐
	Recommended Additional Testing (Not Mandated in the Standard) – FOR OUTDOOR INSTALLATIONS			
	Rating of Enclosure: ☐ CAT 3 ☐ CAT 3R ☐ CAT 4 ☐ Other:			
	Interior free of dirt or evidence of moisture (no corrosion)?	☐	☐	☐
	Is the installed heater compatible with the enclosure? ☐ 24VDC ☐ 24VAC ☐ 120VAC	☐	☐	☐
	Is voltage present at the ☐ heater ☐ thermostat terminals?	☐	☐	☐
	Disconnect means on a separate circuit?	☐	☐	☐
	Disconnect means identification – Panel and Circuit Number:			
	Internal environment supervised by the fire alarm control panel? ☐ Temperature ☐ Power	☐	☐	☐
	Low voltage transformer of the correct size and rating as per the manufacturer's instructions?	☐	☐	☐

No Annunciator or Sequential Display is installed in this system. ☐ (This Section is Not Applicable)

C5.9 ANNUNCIATORS OR SEQUENTIAL DISPLAYS

Annunciator/Sequential Display Location:
Annunciator/Sequential Display Identification:

		Yes	No	N/A
A	Power "on" indicator operates.	☐	☐	☐
B	Individual alarm and supervisory zone indication operates.	☐	☐	☐
	Exception: Operation of each individual alarm and supervisory zone indication gives the identical indication, or lights the identical indicators at the other annunciator(s) and sequential display(s).	☐	☐	☐
	Specify method of confirmation:			
	Minimum of one alarm zone and one supervisory zone tested per annunciator or sequential display to confirm operation.	☐	☐	☐
C	Individual alarm and supervisory input zone designation labels are properly identified.	☐	☐	☐
D	Where active and supporting field devices are utilized, device labels correspond with actual field location.	☐	☐	☐
E	Common trouble signal operates.	☐	☐	☐
F	Visual indicator test (lamp test) operates.	☐	☐	☐
G	Input wiring from control unit or transponder is supervised and of the correct type and gauge in accordance with the equipment manufacturer's installation wiring requirements.	☐	☐	☐
H	Alarm signal silence visual indicator operates.	☐	☐	☐
I	Switches for ancillary functions operate as per design and specification.	☐	☐	☐
J	Ancillary functions visual indicators operates.	☐	☐	☐
K	Manual activation of alarm signal and indication operates.	☐	☐	☐
L	Displays are visible in the installed location.	☐	☐	☐
	Recommended Additional Testing (Not Mandated in the Standard) – FOR OUTDOOR INSTALLATIONS			
	Rating of Enclosure: ☐ CAT 3 ☐ CAT 3R ☐ CAT 4 ☐ Other:			
	Interior free of dirt or evidence of moisture (no corrosion)?	☐	☐	☐
	Is the installed heater compatible with the enclosure? ☐ 24VDC ☐ 24VAC ☐ 120VAC	☐	☐	☐
	Is voltage present at the ☐ heater ☐ thermostat terminals?	☐	☐	☐
	Disconnect means on a separate circuit?	☐	☐	☐
	Disconnect means identification – Panel and Circuit Number:			
	Internal environment supervised by the fire alarm control panel? ☐ Temperature ☐ Power	☐	☐	☐
	Low voltage transformer of the correct size and rating as per the manufacturer's instructions?	☐	☐	☐

Date:			
Building Name:		**Address:**	

No Remote Trouble Signal Unit is installed in this system. ☐ (This Section is Not Applicable)

C5.10 Remote Trouble Signal Unit Test and Inspection

Remote trouble signal unit location:

Remote trouble signal unit identification:

		Yes	No	N/A
A	Input wiring from control unit or transponder is supervised.	☐	☐	☐
B	Visual trouble signal operates.	☐	☐	☐
C	Audible trouble signal operates.	☐	☐	☐
D	Audible trouble signal silence operates.	☐	☐	☐

No Printers are installed in this system. ☐ (This Section is Not Applicable)

C5.11 Printer Test

Printer Location:

Printer Identification:

		Yes	No	N/A
A	Operates as per design and specification	☐	☐	☐
B	Zone of each alarm initiating device is correctly printed.	☐	☐	☐
C	Rated voltage is present.	☐	☐	☐

Date:			
Building Name:		**Address:**	

C5.12 Ancillary Device Circuit Test					
Identify Ancillary Circuit and Device	Ancillary Circuit is Powered by		Operation of Ancillary Circuit Confirmed		
	FAS	**Other**	**Yes**	**No**	**N/A**
	☐	☐	☐	☐	☐
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	☐	☐	☐	☐	☐

Note: The tests reported on this form may not include the actual operational test of ancillary devices unless otherwise noted.

Date:			
Building Name:		**Address:**	

No Interconnection to a Fire Signal Receiving Centre has been provided. ☐ (This Section is Not Applicable)

C5.13 Interconnection to the Fire Signal Receiving Centre

Communicator Location:
Circuit Disconnect Means Location:
Circuit Panel/Breaker Identification:

		Yes	No	N/A
A	The fire signal receiving centre transmitter is integral to the fire alarm control unit.	☐	☒	
B	The fire signal receiving centre transmitter is located remotely from the fire alarm control unit.	☒	☐	
C	Where an interconnection between the fire alarm control unit and a separate fire signal receiving centre transmitter is provided, a demarcation terminal box with a minimum of twelve (12) terminals is installed.	☐	☐	☒
D	The demarcation terminal box is located in the same room as the fire alarm control unit it is connected to.	☐	☐	☒
E	The demarcation terminal box is labeled "Fire Alarm Demarcation" and/or "Limitation D'Alarme Incendie".	☐	☐	☒
F	The conductors installed between the fire alarm control panel and the demarcation terminal box complies with Section 3.4 of CAN/ULC-S524-06.	☐	☐	☒
G	Tested and confirmed operation of alarm relay.	☐	☐	☐
H	Tested and confirmed operation of trouble relay.	☐	☐	☐
I	Tested and confirmed operation of supervisory relay.	☐	☐	☐
J	Confirm that the alarm transmission to the fire signal receiving centre is received.	☐	☐	☐
K	Confirm that the supervisory transmission to the fire signal receiving centre is received.	☐	☐	☐
L	Confirm that the trouble transmission to the fire signal receiving centre is received.	☐	☐	☐
M	Operation of the fire signal receiving centre transmitter bypass means results in a specific trouble indication at the fire alarm control unit or transponder.	☐	☐	☐
N	Operation of the fire signal receiving centre transmitter bypass means transmits a trouble signal to the fire signal receiving centre.	☐	☐	☐
O	The contact information of the fire signal receiving centre is: Company: _____ Telephone: _____ _____ Address:			

Additional Information (not mandated by the Standard):	Yes	No	N/A
The communicator installed in accordance with CAN/ULC-S561-13.	☐	☐	☐
The fire signal receiving centre is ULC Listed.	☐	☐	☐
The fire signal receiving centre ULC certification number is:			
The communicator is being tested in accordance with CAN/ULC-S561-13. Supporting documentation attesting to this is on site and has been reviewed.	☐ ☐	☐ ☐	☐ ☐
The ULC "Central Station Fire Protective Signalling Service" Certificate is valid.	☐	☐	☐
The ULC "Central Station Fire Protective Signalling Service" Certificate expires on:			
The last inspection noted on the Certificate occurred on:			
The communicator has been reset following completion of testing.	☐	☐	☐
The communicator has been placed back into service.	☐	☐	☐
The communicator is trouble free.	☐	☐	☐

ADDITIONAL NOTES (apply to C6.2 Individual Device Record):

3. Where this Report is issued in respect of a Section 7 Modification, "installed correctly" refers to only those devices which were tested and are documented in the attached Appendix C6.2 – Individual Device Record.
4. Sprinkler supervisory switches should cause a device specific "trouble" condition to be annunciated. This should be a latching type trouble (or "supervisory trouble") only restorable by pressing "Reset" on the fire alarm control panel. Exceptions must be noted in "Comments".
5. Upper and lower pressure setting of supervisory devices should be recorded in the "Remarks" column.
6. Low temperature setting should be recorded in the "Remarks" column.
7. Record and identify the specific ancillary devices in the "Remarks" column (if individually tested).
8. Where possible, identify the date a fire detector is changed. If housing discolouration is noted, attempt to identify the source and note the date of manufacture. Heat detectors whose labels are missing, faded and unreadable, or painted are considered failed and require replacement. This information should be noted in the "Remarks" column.
9. Identify type and function of each supporting field device in the "Remarks" column.
10. Prolonged exposure to charging currents in excess of 100 mA will significantly shorten the service life of Ni-Cad and sealed lead acid batteries.
11. Relays connected to listed fire alarm equipment initiating/supervisory circuits must be properly supervised. Note exceptions in "Comments".
12. The system's documentation should provide information concerning the number of addressable devices that are connected to each isolator and identify each isolator's location. Any exceptions should be noted in "Comments".
13. Operation of each annunciator or sequential display must be confirmed visually.
14. Stand-by batteries that are remotely located from the Fire Alarm Common Control must be fused (or installed in accordance with the manufacturer's recommendations or requirements).
15. Test and confirm that visible signal devices used to advise occupants that a fire emergency exists shall be turned on automatically when audible signals are reactivated.
16. Test and confirm that all visible signal devices located within the same visual area are synchronized to flash simultaneously.

Caution: The tests reported on this form may not include the actual operational test of ancillary devices unless otherwise noted.

Date:			
Building Name:		**Address:**	

C6.1 Field Device Testing – LEGEND			
Device	**Description**	**Type**	**Model Number**
	Manual Initiating Devices		
M	**Manual** pull station		
MAS	**Manual Abort Station**		
	Automatic Fire Detection Devices		
HD	**Heat Detector**, restorable or non-restorable, fixed temperature (10, 30)		
RHD	**Heat Detector**, restorable, **rate-of-rise thermostat** (10, 30)		
S	Ionization **Smoke** detector (10, 30)		
	Sensitivity Test Method (or Test Equipment Model/Method):		
	Manufacturer's Sensitivity Test Range:		
PS	**Photo-electric Smoke** detector (10, 30)		
	Sensitivity Test Method (or Test Equipment Model/Method):		
	Manufacturer's Sensitivity Test Range:		
DS	**Duct Smoke** detector (10, 30)		
	Sensitivity Test Method (or Test Equipment Model/Method):		
	Manufacturer's Sensitivity Test Range:		
MC	**Multi-Criteria** type detector (specify detection types) (10, 30)		
	Sensitivity Test Method (or Test Equipment Model/Method):		
	Manufacturer's Sensitivity Test Range:		
CO	**Carbon Monoxide** detector		
OD	**Other Detector** type (specify)		
EOL(R)	**End-of-Line** resistor ("**R**" indicates "Power Supervision Relay") (19)		
	Fire Sprinkler Devices		
FS	Sprinkler **Flow Switch** (30)		
FPS	Sprinkler **Flow Pressure Switch** (30)		
TS	Sprinkler valve supervisory **Tamper Switch** (6)		
LA	**Low Air** supervisory device (6)		
LT	**Low Temperature** supervisory device (6, 7)		
HTC	**Heat Trace Controller**		
TLW	**Tank Low Water** supervisory device		
	Fire Alarm Signalling Devices		
B	**Bell**		
H	**Horn**		
BZ(S)	Mini **Buzzer** ("**S**" indicates "silenceable" type)		
SSB	**Smoke Sounder Base**		
V	**Visual** alarm device (specify strobe type or corridor indicator)		
SP	Cone type **Speaker**		
HSP	**Horn Speaker**		
AV	Combination **Audible/Visual** Device - specify type (i.e. Horn/Strobe Unit)		
SCIM	**Signal Circuit Isolation Module**		
ET	**Emergency Telephone** (Fire Fighter's Phone)		
SYNC	Signalling Circuit **Synchronization** Module		
	Supporting Field Devices (Addressable Systems)		
RPM	**Remote Point Module** (11)		
SRIM	**Single** point **Remote Initiating Module**		
DRIM	**Dual** input **Remote Initiating Module**		
RPIM	**Remote Point Isolator Module** (14)		
SCRM	**Signal Circuit Remote Module**		
RRM(S)	**Remote Relay Module** ("**S**" provides supervised outputs)		
	Extinguishment Releasing Devices		
RS	**Releasing Solenoid**		
PDS	**Pressure Discharge Switch**		
LPS	**Low** Cylinder **Pressure Switch**		
	Ancillary Devices		
DH(M,FL)	**Door Holder** ("**M**" is **Magnetic**, "**FL**" is **Fusible Link**)		
DM	**Damper Motor**		
R	**Relay** (13)		
AD	Other **Ancillary Device** (9, 13)		
SA(S or M)	**Smoke Alarm** (specify **single** or **multi-station** type)		

Date:			
Building Name:		**Address:**	

C6.2 Individual Device Record

"✓" Yes - Acceptable "X" No – Unacceptable (Explain NO answers in comments) "Dash" - Not applicable

Device Location[17]	Annunciation Label or LCD Text Displayed[18] (if applicable)	Device Type[19]	Requires Service, Repairs, Cleaning or Missing[20]	Circuit Number or Address[21]	NBC Fire Alarm Zone[22]	Correctly Installed[23]	Alarm / Operation Confirmed[24]	Annunciation Indication Confirmed[25]	Supervision of Wiring or Device Confirmed[26]	Remarks[27]/ Comments

NOTES:

17. Record the physical location of the device
18. Records the description of the individual device tested as shown on the *annunciator* or *control unit.*
19. Indicate the device type per C6.1, Field Device Testing-Legends and Notes
20. Place check mark if the device requires service, repair, cleaning or if the device is missing
21. Record the circuit number of conventional device or address of *active field device*
22. Record the zone number or description of the NBC required fire alarm zone
23. Place check mark if the device is correctly installed in accordance with CAN/ULC-S524, and the manufacturer's installation instructions
24. Place check mark if the device functions properly
25. Place check mark if the device operation is annunciated in accordance with S524
26. Place check mark if:
    - A. conventional field device circuit activates trouble on an open circuit fault; and
    - *B.* active and supporting field device activates trouble in the absence of the device.
27. *REMARK* - additional details specific to the device or function being tested, such as:
    - i. Measured sensitivity of smoke detector;
    - ii. Measured air differential pressure of duct smoke detector;
    - iii. Record voltage reading at each end-of-line device;
    - iv. Measured mechanical delay of water flow switch;
    - v. Measured voltage at the end-of-line resistor (or last device at the end of the circuit); or
    - vi. Measured transport time of aspiration type smoke detector.

Date:			
Building Name:		**Address:**	

C6.2 Individual Device Record

"✓" Yes - Acceptable "X" No – Unacceptable (Explain NO answers in comments) "Dash" - Not applicable

Device Location[17]	Annunciation Label or LCD Text Displayed[18] (if applicable)	Device Type[19]	Requires Service, Repairs, Cleaning or Missing[20]	Circuit Number or Address[21]	NBC Fire Alarm Zone[22]	Correctly Installed[23]	Alarm / Operation Confirmed[24]	Annunciation Indication Confirmed[25]	Supervision of Wiring or Device Confirmed[26]	Remarks[27]/ Comments

Date:			
Building Name:		**Address:**	

C6.2A CIRCUIT FAULT TOLERANCE TEST SHEET

"✓" Yes - Acceptable "X" No – Unacceptable (Explain NO answers in comments) "Dash" - Not applicable

Circuit Fault Test Location	Type of Fault Tested			Isolation Results	Non-Faulted Circuit Location
Identify Device Location where circuit fault was introduced and provide a description of affected NBC Fire Alarm zone or area	Short	Open	Ground	Identify the NBC Fire Alarm Zone or area Location where devices failed due to a fault condition	Identify the Individual Device tested for operation located in the Non-Faulted NBC Fire Alarm zone or area

Date:			
Building Name:		**Address:**	

C6.3 SIGNALLING DEVICE SOUND LEVEL MEASUREMENT

(Reference: Clause 5.10.1-C)

Zone	Location/Description	Ambient dBA	Alarm dBA	Remarks

Remarks/Comments

Date:			
Building Name:		**Address:**	

C6.4 SIGNALLING DEVICE INTELLIGIBILITY MEASUREMENT

(Reference: CAN/ULC-S537-13 Clause 6.10.1-C and 6.10.1-G, BCBC 2012 Sentence 3.2.4.22-2)

Zone	Location/Description	Intelligibility CIS	Remarks

Remarks/Comments

Date:			
Building Name:		**Address:**	

C6.5 DEFICIENCIES

To be completed by the primary individual who conducted the test and inspection.					To be completed by the Building Owner / Representative			
Item #	**Device Type**	**Device Location**	**Deficiency**	**CAN/ULC-S537-13 Clause Reference**	**Date Corrected (MM/DD/YY)**	**Work Order or Reference #**	**Name of Service Provider Responsible for the Repair**	**Technician's Signature**

Item #	**Control Function or Feature**	**Deficiency**	**CAN/ULC-S537-13 Clause Reference**	**Date Corrected (MM/DD/YY)**	**Work Order or Reference #**	**Name of Service Provider Responsible for The Repair**	**Technician's Signature**

Date:			
Building Name:		**Address:**	

C6.6 Recommendations

C6.7 Remarks