

ARTICLE I

GENERAL REQUIREMENTS

1. THE INTENT AND MEANING OF THE TERMS IN THIS STANDARD SHALL BE, UNLESS OTHERWISE DEFINED HEREIN, THE SAME AS THOSE OF APPLICABLE REFERENCE STANDARDS.
2. THESE REQUIREMENTS ARE NOT TO BE CONSTRUED AS TO BE COMPLETE BUT ONLY AS A GUIDE. ALL QUESTIONS REGARDING FIRE ALARM SYSTEMS SHALL BE RESOLVED BEFORE PROCEEDING WITH THE INSTALLATION/ALTERATION OF A SYSTEM.
3. COMPLETE INFORMATION REGARDING THE SYSTEM, INCLUDING SPECIFICATIONS, WIRING DIAGRAMS, AND FLOOR PLANS SHALL BE SUBMITTED TO THE FIRE DEPARTMENT FOR APPROVAL PRIOR TO THE INSTALLATION OF THE EQUIPMENT OR WIRING. THE APPROVAL PROCESS SHALL BE A REVIEW BY THE FIRE MARSHAL/ENGINEERING UNIT OF THE FIRE ALARM CONSTRUCTION DOCUMENTS, ISSUANCE OF A FIRE ALARM PERMIT AND A WITNESSING OF A SUCCESSFUL FINAL ACCEPTANCE TEST OF THE SYSTEM BY THE FIRE MARSHAL/INTERNAL SYSTEMS INSPECTOR. BLUEPRINTS ARE ACCEPTED AND STAMPED "APPROVED AS TO LAYOUT ONLY, SUBJECT TO ON-SITE ACCEPTANCE TEST BY FIRE DEPARTMENT". THE BOSTON FIRE DEPARTMENT ASSUMES NO RESPONSIBILITY FOR ITEMS OMITTED ON THE BLUEPRINT OR SPECIFICATIONS BUT REQUIRED BY THIS DOCUMENT OR ANY OTHER APPLICABLE CODES. "FINAL APPROVAL" IS GIVEN ONLY AFTER COMPLETION OF ALL ASPECTS OF THIS AGREEMENT AND IS SIGNIFIED BY THE SIGNING OFF OF THE FIRE DEPARTMENT SECTION OF THE BUILDING OCCUPANCY PERMIT APPLICATION. THE INSTALLATION OF ALL APPROVED FIRE PROTECTIVE SYSTEMS SHALL BEGIN WITHIN SIX (6) MONTHS OF THE ISSUANCE OF A PERMIT (WHEN THE WORK COMMENCES WITHIN 6 MONTHS OF THE ISSUANCE OF THE PERMIT THE PERMIT WILL BE VALID FOR ONE YEAR FROM THE DATE OF ITS ISSUANCE), OR NOTIFICATION BY THE FIRE MARSHAL THAT SUCH INSTALLATION IS REQUIRED, AFTER WHICH TIME SAID PLANS SHALL BE SUBJECT TO AN ADDITIONAL REVIEW. THE FIRE MARSHAL SHALL APPROVE ONLY ONE (1) FIRE ALARM SYSTEM DESIGN PER BUILDING. NO INSTALLATION OR ALTERATION WORK IS TO BE PERFORMED PRIOR TO THE ISSUANCE OF THE FIRE ALARM PERMIT.

4. ANY DEVIATIONS FROM THE ORIGINAL SET OF BLUEPRINTS, AS PRESENTED, MUST BE SUBMITTED TO THE FIRE MARSHAL/ENGINEERING UNIT FOR APPROVAL.
5. WHERE MORE THAN ONE (1) BUILDING IS INCLUDED IN A GROUPING OF BUILDINGS, ANY SUCH BUILDING SHALL BE PROVIDED WITH A FIRE PROTECTIVE SYSTEM SEPARATE AND INDEPENDENT OF ANY SYSTEM INSTALLED IN ANOTHER BUILDING UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL. A PREMISES IDENTIFICATION NUMBER (PIN) WILL BE ESTABLISHED WITH THE FIRE ALARM DIVISION PRIOR TO ACCEPTANCE TESTING FOR EACH BUILDING BEING MONITORED. IN A CAMPUS TYPE SYSTEM WHERE MULTIPLE BUILDINGS AND THEIR SYSTEMS ARE CONNECTED TO A MASTER FIRE ALARM CONTROL PANEL OR A SINGLE DIGITAL ALARM COMMUNICATION TRANSMITTER,

EACH BUILDING WILL BE IDENTIFIABLE WITH A DISTINCT PIN FOR ALARM ACTIVATION FOR EACH BUILDING AND/OR ADDRESS. A MAXIMUM OF ONE BUILDING WILL BE ALLOWED TO BE ON TEST MODE OR "OFF-LINE" AT ANY SINGLE TIME FOR MAINTENANCE, TEST, REPAIR, OR ALTERATION WITHOUT AFFECTING THE OTHER BUILDINGS MONITORING STATUS. THE CENTRAL STATION SHALL HAVE THE CAPABILITY TO IDENTIFY WHICH BUILDING IN A CAMPUS STYLE SYSTEM IS "OFF-LINE".
6. ALL DEVICES, COMBINATION OF DEVICES AND EQUIPMENT CONSTRUCTED AND INSTALLED IN CONFORMITY WITH THIS STANDARD SHALL BE APPROVED FOR THE PURPOSE FOR WHICH THEY ARE TO BE USED AND SHALL BE SHOWN ON APPROPRIATE DRAWINGS. THE SUBMITTED DRAWINGS, APPROPRIATELY SCALED, SHALL SHOW ALL DETECTOR PLACEMENTS ON DEDICATED FIRE ALARM SYSTEM DRAWINGS. (NO OTHER SYSTEM SHALL BE SHOWN.)
7. ADDITIONS AND MODIFICATIONS TO EXISTING SYSTEMS WILL REQUIRE A NEW APPLICATION AND SUBMITTAL. A WRITTEN "CUTOVER" PROCEDURE WITH AN INSTALLATION SCHEDULE IS REQUIRED AT TIME OF PERMIT APPLICATION WHENEVER A NEW FIRE ALARM SYSTEM OR PORTION OF THE SYSTEM IS TO BE INSTALLED IN A BUILDING IN ORDER TO REPLACE AN EXISTING FIRE ALARM SYSTEM. A PROPOSED TESTING SCHEDULE, SUBJECT TO THE SCHEDULING DEMANDS AND APPROVAL OF THE INTERNAL SYSTEMS INSPECTORS, SHALL ALSO BE SUBMITTED. THE EXISTING FIRE ALARM SYSTEM SHALL REMAIN OPERATIONAL UNTIL THE NEW FIRE ALARM SYSTEM OR PORTION OF IT HAS BEEN SUCCESSFULLY ACCEPTANCE TESTED AND WITNESSED BY THE INTERNAL SYSTEMS INSPECTORS. NEW FIRE ALARM SYSTEMS PROPOSED TO BE INSTALLED IN PHASES SHALL DESCRIBE IN WRITING THE FIRE PROTECTION AND LIFE SAFETY FEATURES THAT WILL BE

MAINTAINED OR IMPLEMENTED DURING ANY FIRE ALARM SYSTEM IMPAIRMENT AND WILL BE SUBJECT TO REVIEW AND APPROVAL BY THE FIRE MARSHAL. FIRE ALARM SYSTEM INSTALLATIONS FOR BUILDINGS PROPOSING TO APPLY FOR TEMPORARY CERTIFICATES OF OCCUPANCY SHALL BE IN ACCORDANCE WITH BOSTON FIRE DEPARTMENT GUIDELINES INCLUDING CONSTRUCTION FLOOR FIRE ALARM SYSTEMS IN PARTIALLY OCCUPIED BUILDINGS AND SHALL BE SUBJECT TO TESTING AND INSPECTION AND ALSO SHALL BE SUBJECT TO REVIEW AND APPROVAL OF THE FIRE MARSHAL. PROPOSED MULTIPLE PHASE FIRE ALARM SYSTEM INSTALLATIONS SHALL BE SUBMITTED AS A SINGLE PROJECT AT THE TIME OF PERMIT APPLICATION AND SHALL INCLUDE WITH THE APPLICATION, BUT NOT BE LIMITED TO, THE FOLLOWING DOCUMENTATION; A SCHEDULE OF INSTALLATION PHASING AND TESTING, ALL PROPOSED OCCUPANCIES, ALL IMPAIRMENT MITIGATIONS (SEE SECTION 24 OF THIS ARTICLE) AND WILL BE SUBJECT TO REVIEW AND APPROVAL BY THE FIRE MARSHAL. A WRITTEN EXPLANATION FROM THE OWNER OR OWNER'S AGENT FOR ANY TEMPORARY OR PARTIAL CERTIFICATE OF OCCUPANCY REQUEST SHALL ALSO BE SUBMITTED FOR REVIEW AND SUBJECT TO APPROVAL BY THE FIRE MARSHAL.

8. ALL SYSTEM COMPONENTS AND INTERCONNECTED WIRING (I.E., CONTROL UNITS, ANNUNCIATORS, DETECTION DEVICES, AUDIBLE/VISUAL SIGNALS, INITIATING DEVICES, AND ACCESSORIES) SHALL BE LISTED AND LABELED BY A QUALIFIED LABORATORY OR TESTING AGENCY, SUCH AS UNDERWRITERS LABORATORIES INC. (UL) OR FACTORY MUTUAL (FM), AS COMPLYING WITH APPLICABLE PERFORMANCE STANDARDS AND SHALL BEAR SPECIFIC IDENTIFICATION(S) INDICATING SUCH COMPLIANCE.
9. EXCEPT AS ALLOWED FOR AUXILIARY (MASTER BOX CONNECTED) FIRE ALARM SYSTEMS AND PROPRIETARY SUPERVISING STATION FIRE ALARM SYSTEMS, ALL ALARM, TROUBLE AND SUPERVISORY SIGNALS FROM A PROTECTED PREMISES FIRE ALARM SYSTEM SHALL BE TRANSMITTED AUTOMATICALLY TO, RECORDED IN AND SUPERVISED BY A UL LISTED OR FM APPROVED CENTRAL STATION.
10. ALL WIRING AND ASSOCIATED DEVICES SHALL MEET THE REQUIREMENTS OF THE MASSACHUSETTS ELECTRICAL CODE (527 CMR 12). THE INSPECTIONAL SERVICES DEPARTMENT'S ELECTRICAL INSPECTORS SHALL BE THE ENFORCING AUTHORITY REGARDING COMPLIANCE WITH THE REQUIREMENTS OF 527 CMR 12. IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO OBTAIN ALL REQUIRED PERMITS (BUILDING PERMITS, ELECTRICAL PERMITS, ETC.) OR BUILDING CODE

VARIANCES PRIOR TO THE START OF WORK AND THE BOSTON FIRE DEPARTMENT RESERVES THE RIGHT TO REQUIRE EVIDENCE OF ALL BUILDING AND ELECTRICAL PERMITS AND ANY PERTINENT VARIANCES.

11. MONITORED SYSTEMS SHALL BE UNDER THE SUPERVISION OF A FIRE ALARM SERVICE COMPANY WHO SHALL, UNDER CONTRACTUAL AGREEMENT, BE RESPONSIBLE FOR ALL INSPECTIONS, TESTS AND/OR ALTERATIONS REQUIRED FOR THAT SYSTEM. SAID FIRE ALARM SERVICE COMPANIES SHALL COMPLY WITH ALL APPLICABLE STATE LAWS, LICENSES, ORDINANCES, RULES, OR REGULATIONS. FIRE ALARM SERVICE COMPANIES INTENDING TO SERVICE A FIRE ALARM SYSTEM WITH A MASTER BOX CONNECTION SHALL ADDITIONALLY HOLD A CERTIFICATE OF COMPETENCY ISSUED BY THE BOARD OF EXAMINERS OF THE INSPECTIONAL SERVICES DEPARTMENT WITH AN F-1 ENDORSEMENT FOR DIRECT MUNICIPAL CONNECTIONS.
12. PRIOR TO MAKING THE FINAL INSPECTION A CONTRACT MUST BE IN EVIDENCE BETWEEN THE BUILDING OWNER AND THE FIRE ALARM SERVICE COMPANY FOR THE TESTING AND MAINTENANCE (IN ACCORDANCE WITH NFPA 72 AS AMENDED BY THIS ORDER) OF THE BUILDING ALARM SYSTEM. THIS FIRE ALARM SERVICE COMPANY MUST HOLD A CERTIFICATE OF COMPETENCY AS A FIRE ALARM SYSTEMS CONTRACTOR FROM THE BOARD OF EXAMINERS OF THE INSPECTIONAL SERVICES DEPARTMENT OF THE CITY OF BOSTON WITH AN F-1 ENDORSEMENT IF THEY INTEND TO TEST AND MAINTAIN A FIRE ALARM SYSTEM WITH A MASTER BOX CONNECTION.
13. THE FIRE ALARM SERVICE COMPANY MUST SUBMIT AN APPLICATION ATTESTING TO A 100% ACCEPTANCE TEST IN ACCORDANCE WITH NFPA 72, CHAPTER 10, THE MANUFACTURER'S REQUIREMENTS AND ANY TESTING REQUIREMENTS PER THE FIRE PROTECTION NARRATIVE FOR THE BUILDING FIRE ALARM SYSTEM INCLUDING ALL SINGLE/MULTIPLE STATION SMOKE DETECTORS, A FINAL DESIGN AFFIDAVIT FROM THE RESPONSIBLE DESIGN PROFESSIONAL AND A PRELIMINARY RECORD OF COMPLETION. THE REQUEST FOR THE FIRE DEPARTMENT ACCEPTANCE TEST MUST BE RECEIVED AT LEAST FIVE (5) DAYS PRIOR TO THE DATE REQUESTED FOR THE TEST. THIS APPLICATION SHALL BE PRIMA FACIE EVIDENCE THAT THE SYSTEM IS READY FOR FIRE DEPARTMENT INSPECTION. IN THE EVENT OF FAILURE OF THE FIRE DEPARTMENT ACCEPTANCE TEST THE BOSTON FIRE DEPARTMENT MAY REQUIRE THAT A PENALTY FEE BE IMPOSED FOR ANY SUBSEQUENT FIRE DEPARTMENT ACCEPTANCE TESTING.

NOTE: THE 100% INSPECTION CERTIFICATE SHALL BE FORWARDED TO THE FIRE DEPARTMENT SUPERVISOR OF INTERNAL SYSTEMS WITH THE APPLICATION FORM FOR THE ACCEPTANCE TEST

14. IF THE BUILDING OWNER REQUIRES AN ACCEPTANCE TEST AFTER NORMAL WORKING HOURS FOR HIS/HER CONVENIENCE, THE FIRE ALARM SERVICE COMPANY SHALL FORWARD A WRITTEN REQUEST TO THE FIRE MARSHAL SPECIFYING THE LOCATION, DATE, AND TIME AND INDICATE THE REASON FOR THE SPECIAL REQUEST. A WRITTEN AGREEMENT SHALL BE SIGNED BY ALL PARTIES REGARDING THE ACCRUED COST.
15. A MINIMUM OF TWO (2) REPRESENTATIVES OF THE FIRE ALARM SERVICE COMPANY SHALL BE PRESENT WITH RADIOS, A CALIBRATED SOUND LEVEL METER, AND PROPER SIGNAGE TO PERFORM THE ACCEPTANCE TEST. WHEN TESTING A FIRE ALARM SYSTEM WITH A MASTER BOX CONNECTION, AT LEAST ONE (1) OF THE REPRESENTATIVES SHALL HAVE AN "IDENTIFYING SIGNATURE" AND HAVE BEEN DIRECTLY INVOLVED WITH THE INSTALLATION AND/OR COMPLETELY FAMILIAR WITH THE SYSTEM.
16. ALL PARTIES INVOLVED WITH THE LAYOUT, INSTALLATION AND MAINTENANCE OF FIRE ALARM SYSTEMS WITHIN THE CITY OF BOSTON SHOULD BE AWARE THAT THE INSPECTORS ARE ALLOWED TO MAKE JUDGMENTS WITHIN A SPECIFIC RANGE OF AUTHORITY TO ACCOMMODATE CONSTRUCTION PROBLEMS ON A CASE BY CASE BASIS. THE LOCATION OF MASTER BOXES SHALL BE SUBJECT TO THE REVIEW AND APPROVAL BY THE SUPERVISOR OF INTERNAL SYSTEMS. A PERMIT IS REQUIRED FOR THE REMOVAL OF ANY EXISTING MASTER BOX SUBJECT TO REVIEW AND APPROVAL BY THE SUPERVISOR OF INTERNAL SYSTEMS.
17. FINAL ACCEPTANCE OF THE SYSTEM BY THE FIRE DEPARTMENT WILL OCCUR WHEN THE FIRE DEPARTMENT SECTION OF THE BUILDING OCCUPANCY PERMIT APPLICATION IS SIGNED.
18. ALL PRESCRIBED MAINTENANCE PROCEDURES AND PERIODIC TESTS REQUIRED FOR FIRE ALARM SYSTEMS SHALL BE PERFORMED ONLY BY PERSONS PRESENTLY EMPLOYED BY THE FIRE ALARM SERVICE COMPANY UNDER CONTRACTUAL AGREEMENT FOR THAT PURPOSE. FOR THOSE FIRE ALARM SYSTEMS WITH A MASTER BOX CONNECTION, ONLY PERSONS WITH ASSIGNED "IDENTIFYING SIGNATURES" ON RECORD WITH THE FIRE DEPARTMENT AND PRESENTLY EMPLOYED

BY THE FIRE ALARM SERVICE COMPANY UNDER CONTRACTURAL AGREEMENT SHALL PERFORM PRESCRIBED MAINTENANCE PROCEDURES AND PERIODIC TESTS.

19. THE FIRE MARSHAL/SUPERINTENDENT OF FIRE ALARM SHALL BE NOTIFIED IMMEDIATELY BY THE SERVICE COMPANY REGARDING ANY CHANGE IN STATUS OF EMPLOYEES WITH "IDENTIFYING SIGNATURES".
20. THE FIRE MARSHAL SHALL BE NOTIFIED AT LEAST THIRTY (30) DAYS PRIOR TO CANCELLATION OF A MAINTENANCE AGREEMENT FOR MASTER BOX OR CENTRAL STATION CONNECTED SYSTEMS. SUCH NOTICE SHALL BE IN WRITING STATING THE DATE AND TIME SUCH CANCELLATION IS TO TAKE EFFECT. IN THE EVENT THAT THE FIRE ALARM SERVICE COMPANY, DUE TO UNFORESEEN EMERGENCY CONDITIONS, CANNOT COMPLY WITH THE THIRTY (30) DAYS NOTICE PROVISION, NOTICE OF CANCELLATION SHALL BE BY TELEPHONE TO THE SUPERVISOR OF INTERNAL SYSTEMS FOLLOWED BY A LETTER TO THE SUPERVISOR OF INTERNAL SYSTEMS. IT SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM SERVICE COMPANIES INVOLVED TO NOTIFY THE SUPERVISOR OF INTERNAL SYSTEMS REGARDING CANCELLATIONS AND/OR PROCUREMENTS OF CONTRACTUAL AGREEMENTS RELATING TO FIRE ALARM SERVICE. CANCELLATION OF REQUIRED CENTRAL STATION MONITORING WILL NOT BE PERMITTED WITHOUT FIRST OBTAINING A PERMIT FROM THE BOSTON FIRE DEPARTMENT. THE PERMIT APPLICATION WILL REQUIRE EVIDENCE OF A WRITTEN CONTRACT BETWEEN THE OWNER AND THE NEW CENTRAL STATION MONITORING COMPANY. THE WRITTEN NOTICE SHALL STATE THAT THERE SHALL BE NO LOSS OF CONTINUITY OF REQUIRED CENTRAL STATION MONITORING OF A FIRE ALARM SYSTEM DURING ANY PERIOD OF TRANSITION.
21. ALL FIRE ALARM SERVICE COMPANIES LICENSED TO PERFORM FIRE ALARM MAINTENANCE SHALL BE RESPONSIBLE FOR MEETING THE TECHNICAL REQUIREMENTS OF THE CITY OF BOSTON ORDINANCE, TITLE 11, CHAPTER 4. COPIES OF THIS ORDINANCE ARE AVAILABLE FROM THE OFFICE OF THE BOSTON FIRE MARSHAL.
22. RESTORING OF A FIRE ALARM SYSTEM FROM AN ALARM CONDITION TO A NORMAL CONDITION SHALL BE ACCOMPLISHED WITHIN TWO (2) HOURS OF AN ALARM.
23. WHEN FIRE PREVENTION ORDER 11-1 AND U. L. REQUIREMENTS OR APPROVED DRAWINGS DIFFER, FIRE PREVENTION ORDER 11-1 REQUIREMENTS SHALL TAKE PRECEDENCE.

24. IMPAIRMENTS TO EXISTING FIRE ALARM SYSTEMS FOR PURPOSE OF REPAIR, ALTERATION OR INSTALLATION SHALL COMPLY AS A MINIMUM WITH THE REQUIREMENTS OF THIS FIRE PREVENTION ORDER, NFPA 241, BOSTON FIRE PREVENTION CODE, INCLUDING BUT NOT LIMITED TO ARTICLES VII AND XII, BOSTON FIRE DEPARTMENT SAFEGUARDING CONSTRUCTION, ALTERATION AND DEMOLITION OPERATIONS BULLETIN AND NFPA 72. PROPOSED MITIGATION MEASURES SHALL BE IN WRITING AND SUBMITTED BY THE OWNER'S DESIGNATED FIRE ALARM IMPAIRMENT COORDINATOR AT TIME OF PERMIT APPLICATION SUBMITTAL AND SHALL BE FOR ALL PHASES OF THE PROPOSED WORK AND AS REQUIRED PER MGL CH 148 S 27A IS SUBJECT TO ANY ADDITIONAL CONDITIONS REQUIRED BY THE BOSTON FIRE DEPARTMENT.

NOTE: ITEMS TO BE CONSIDERED, BUT NOT LIMITED TO, INCLUDE MINIMIZING THE SIZE OF THE IMPAIRMENT, MINIMIZING THE TIME OF IMPAIRMENT, MAINTAINING THE AUTOMATIC FIRE SUPPRESSION SYSTEM AND ITS ALARM FEATURES, MAINTAINING THE NOTIFICATION APPLIANCES, MAINTAINING MANUAL PULL STATIONS, BAGGING OR ZONING OUT DETECTORS DURING WORK HOURS, MAINTAINING SMOKE DETECTORS PERFORMING FIRE SAFETY FUNCTIONS, I.E, ELEVATOR RECALL, SMOKEPROOF ENCLOSURE ACTIVATION, SUBSTITUTING HEAT DETECTORS FOR SMOKE DETECTORS, PROVIDING A QUALIFIED PERSON AT THE FIRE ALARM CONTROL PANEL, FIRE WATCH AND PATROL TRAINING, PROPER NOTIFICATIONS TO ALL REQUIRED PERSONS AND ORGANIZATIONS, PERFORMING WORK DURING OFF NORMAL HOURS, ETC.

25. THE FIRE MARSHAL OF THE CITY OF BOSTON SHALL HAVE POWER AND AUTHORITY TO PASS UPON ANY MATTER AS IT PERTAINS TO 11-1, TO CHANGE, MODIFY, AMEND, ADD, OR DELETE ANY PORTION OF 11-1 AND TO PROVIDE FINAL INTERPRETATION ON ANY MATTER AS IT PERTAINS TO THIS DOCUMENT.

ARTICLE II

MUNICIPAL CONNECTIONS

1. CABLE MUST BE FURNISHED AND INSTALLED FROM THE MASTER FIRE ALARM BOX TO A CONNECTION POINT IN THE MUNICIPAL FIRE ALARM SYSTEM DESIGNATED BY THE SUPERINTENDENT OF FIRE ALARM. THE APPLICANT MUST SUPPLY ALL NECESSARY CABLE AND HARDWARE FOR SUCH CONNECTION. THE INSTALLATION WILL BE DONE BY THE FIRE ALARM CONSTRUCTION SECTION OF THE FIRE ALARM

- DIVISION OF THE BOSTON FIRE DEPARTMENT. THE FEE FOR THIS SERVICE WILL BE DETERMINED BY THE GENERAL FOREMAN OF THE FIRE ALARM CONSTRUCTION SECTION OF THE FIRE ALARM DIVISION.
2. ABSOLUTELY NO CONNECTION WILL BE MADE TO MUNICIPAL FIRE ALARM CIRCUITS EXCEPT BY FIRE DEPARTMENT PERSONNEL.
 3. CABLE FOR UNDERGROUND SERVICE SHALL MEET THE REQUIREMENTS OF SPECIFICATION 19-5 OF THE INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA).
 4. CABLE FOR OVERHEAD CONSTRUCTION SHALL BE SPECIFICATION 29-3 IMSA FOR A SINGLE OVERHEAD CONNECTED MASTER FIRE ALARM BOX. CONDUCTORS SHALL BE HARD DRAWN COPPER, 100% CONDUCTIVITY. CABLE FOR OVERHEAD CONSTRUCTION FOR MORE THAN ONE (1) MASTER FIRE ALARM BOX SHALL BE SPECIFICATION 19-5 IMSA.
 5. THE OVERHEAD AND UNDERGROUND CABLE OUTER JACKET SHALL BE RED.
 6. OVERHEAD CONSTRUCTION SHALL BE APPROPRIATE HARDWARE INCLUDING "J" HOOKS, DEAD END SUPPORTS AND CABLE BOXES FOR SPECIFICATION 29-4 IMSA CABLE. OVERHEAD CONSTRUCTION FOR MULTIPLE CONDUCTOR CABLE SHALL EITHER BE BY AERIAL MESSENGER OR INTEGRAL MESSENGER.
 7. OVERHEAD CONSTRUCTION ENTERING A BUILDING SHALL BE PROTECTED BY AN APPROVED LIGHTNING ARRESTOR.
 8. ALL CABLE CONTAINING MUNICIPAL FIRE ALARM CIRCUITS IN A BUILDING SHALL BE ENCLOSED IN AN APPROVED RACEWAY. ALL CONNECTOR/PULL BOXES FOR THIS CABLE SHALL BE PAINTED RED. A RED TWO (2) INCH WIDE STRIPE SHALL BE PLACED ON THIS CONDUIT EVERY TEN (10) FEET. THE COVERS OF THE BOXES SHALL BE LABELED "MUNICIPAL FIRE ALARM CIRCUIT".
 9. MASTER BOXES SHALL BE COVERED DURING CONSTRUCTION TO PREVENT ACCIDENTAL USE AND REMAIN COVERED UNTIL THE MUNICIPAL CONNECTION IS COMPLETED AND THE SYSTEM IS APPROVED BY THE SUPERINTENDENT OF FIRE ALARM.
 10. SPECIFICATION 19-5 IMSA CABLE SHALL BE USED BETWEEN THE SERVICE ENTRANCE TO THE BUILDING AND MASTER FIRE ALARM BOX.
 11. CABLE ENTERING BUILDINGS FROM UNDERGROUND MAY USE EXISTING DUCTWORK OF THE VERIZON COMPANY TO ENTER THE BUILDING. IF SUCH DUCTWORK IS NOT AVAILABLE, THEN A MINIMUM (3) INCH DUCT SHALL BE INSTALLED AS DIRECTED BY THE SUPERINTENDENT OF FIRE ALARM. SUCH

DUCTWORK SHALL BE EITHER SCHEDULE 40 PVC PIPE OR FIBER DUCT ENCLOSED IN CONCRETE. DUCT SIZE SHALL BE APPROPRIATE FOR THE CABLE USED.

12. THE MASTER FIRE ALARM BOX (MASTER BOX) SHALL BE AN APPROVED, LOCAL ENERGY TYPE WITH BOSTON FIRE DEPARTMENT (BFD) LOCK. THE INNER CASE AND MOVEMENT SHALL BE SENT TO THE FIRE ALARM MACHINE SHOP AT 115 SOUTHAMPTON STREET FOR THE CUTTING OF THE BREAK WHEEL, TIMING AND TESTING. THE CHARGE FOR THIS SERVICE SHALL BE DETERMINED BY THE SUPERINTENDENT OF FIRE ALARM.
13. SHUNT TYPE MASTER FIRE ALARM BOXES ARE NOT ALLOWED.
14. THE MASTER FIRE ALARM BOX TRIP CIRCUIT SHALL BE SUPERVISED AND ITS STATUS SHALL BE ANNUNCIATED AT THE CENTRAL CONTROL PANEL AND THROUGH THE SYSTEM TROUBLE INDICATOR AT THE REMOTE ANNUNCIATOR.
15. A GROUND CONNECTION SHALL BE INSTALLED FROM THE GROUND TERMINAL OF THE MASTER FIRE ALARM BOX TO THE ELECTRICAL EQUIPMENT GROUND OF THE BUILDING, USING A GREEN NUMBER 12 THHN WIRE MINIMUM. A GROUND STRAP WILL ALSO BE INSTALLED BETWEEN THE GROUND CONNECTION AND THE SHELL OF THE BOX.
16. THE MASTER FIRE ALARM BOX SHALL BE LOCATED INSIDE THE BUILDING AS DIRECTED BY THE SUPERINTENDENT OF FIRE ALARM.
17. THE MASTER FIRE ALARM BOX SHALL BE EQUIPPED WITH THE NECESSARY MEANS TO PERMIT IT TO ACT AS A MANUAL STATION OF THE BUILDING ALARM SYSTEM. IN NON-CODED SYSTEMS IT SHALL BE ANNUNCIATED SEPARATELY. IN CODED SYSTEMS IT SHALL BE OPERATED BY ITS OWN SPECIALLY CODED SYSTEM.
18. THE FIRE DEPARTMENT RESERVES THE RIGHT TO DISCONNECT SERVICE TO THE MASTER BOX AT ANY TIME FOR NON-COMPLIANCE WITH FIRE DEPARTMENT REGULATIONS OR IN CASE OF SYSTEM TROUBLE WHICH MIGHT ENDANGER THE PROPER OPERATION OF THE MUNICIPAL SYSTEM. THE OWNER WILL BE NOTIFIED OF ANY DISCONNECTION.

ARTICLE III

PERFORMANCE REQUIREMENTS – ALL SYSTEMS

1. THE DEFINITION AND STANDARDS OF APPLICABLE REFERENCE STANDARDS FOR INTERIOR FIRE ALARM SYSTEMS SHALL BE USED FOR DEFINING THE OPERATION AND COMPONENT MAKEUP OF INTERIOR FIRE ALARM SYSTEMS.
2. THE GENERAL OPERATION OF ANY FIRE ALARM SYSTEM SHALL BE TO GIVE NOTICE TO THE FIRE DEPARTMENT AND TO THE OCCUPANTS OF THE BUILDING OF THE EXISTENCE OF A FIRE, TO SUPERVISE THE SYSTEM FOR TROUBLE AND ABNORMAL CONDITIONS AND TO PROVIDE TROUBLE AND ABNORMAL NOTIFICATIONS.
3. ALL SYSTEM TROUBLES SHALL BE INDICATED BOTH AUDIBLY AND VISUALLY AT THE TIME OF TROUBLE. MEANS SHALL BE PROVIDED TO SILENCE THE AUDIBLE SIGNAL BUT THE VISUAL SIGNAL SHALL REMAIN LIGHTED UNTIL THE SYSTEM HAS BEEN RESTORED TO NORMAL OPERATION. THE AUDIBLE AND VISUAL TROUBLE SIGNALS SHALL BE LOCATED SO AS TO BE READILY HEARD/SEEN BY PERSONNEL ON DUTY WITHIN THE PROTECTED PROPERTY.
4. ALL NON-KEY OPERATED SWITCHES SHALL BE ENCLOSED WITHIN LOCKED CONTROL CABINETS OR REMOTE PANELS. ALL KEY OPERATED SWITCHES SHALL BE OF THE TYPE, WHICH RETAINS THE KEY, WHEN THE SWITCH IS NOT IN ITS NORMAL POSITION. ANY SWITCH THAT IS NOT ORIGINALLY INSTALLED BY THE PANEL MANUFACTURER REQUIRES THAT THE RESPONSIBLE DESIGN PROFESSIONAL INCORPORATE IN THE DESIGN NARRATIVE DESCRIPTIONS FOR THEIR FUNCTION, ANNUNCIATION AND SEQUENCE OF OPERATION, A CODE ANALYSIS FOR THEIR INCLUSION, A CODE ANALYSIS ALLOWING THE PANEL MODIFICATION AND PROVISIONS FOR PREVENTING UNAUTHORIZED USE.
5. “AS BUILT” DRAWINGS AND A WORKING TELEPHONE SHALL BE IN A CABINET EQUIPPED WITH THE BOSTON FIRE DEPARTMENT LOCK AND KEY. THE CABINET SHALL BE MARKED “AS BUILT DRAWING AND TELEPHONE CABINET”. THIS SPECIAL CABINET SHALL BE LOCATED NEXT TO THE MASTER FIRE ALARM BOX OR NEXT TO THE FIRE ALARM CONTROL PANEL OR AS DIRECTED BY THE FIRE DEPARTMENT.
6. EMERGENCY GENERATORS SHALL BE TESTED BY THE BUILDING OWNER’S REPRESENTATIVE ON A QUARTERLY BASIS AND SHALL BE TESTED UNDER A LOAD EQUIVALENT TO THE EXPECTED LOAD.

7. THE WIRING SEQUENCE OF DEVICES ON EACH ZONE SHALL BE MANUAL ALARM STATIONS FIRST, ZONED WATERFLOW SWITCHES SECOND, HEAT DETECTORS THIRD, OTHER INITIATING DEVICES FOURTH, SMOKE OR SMOKE/HEAT DETECTOR COMBINATIONS FIFTH AND TAMPER SWITCHES ELECTRICALLY LAST. THE REMOVAL OF A SMOKE DETECTOR OR MOVEMENT OF THE TAMPER SWITCH TO AN OFF NORMAL POSITION SHALL NOT INTERFERE WITH THE OPERATION OF TRANSMISSION OF A SIGNAL FROM MANUAL STATIONS, ZONED WATERFLOW SWITCHES, HEAT DETECTORS OR OTHER INITIATING DEVICES, EXCEPT FOR AN ADDRESSABLE POINT IDENTIFICATION SYSTEM WHERE REMOVAL OF A DEVICE SHALL NOT INTERFERE WITH THE OPERATION OF ANY OTHER DEVICE. ADDRESSABLE FIRE ALARM SYSTEMS SHALL BE INSTALLED AS REQUIRED PER APPLICABLE CODES AND MANUFACTURER'S REQUIREMENTS.
8. WHEN USING ADDRESSABLE MODULES FOR TRIPPING AND/OR SUPERVISING LOCAL ENERGY MASTER BOX TRIP CIRCUITS, THEY SHALL BE PLACED ELECTRICALLY FIRST ON THE ADDRESSABLE CIRCUIT, AND MOUNTED AT THE FIRE ALARM CONTROL PANEL. THE MODULE SHALL BE PROTECTED AND SHALL REMAIN FUNCTIONAL IN THE EVENT OF A SHORT CIRCUIT ACROSS THE ADDRESSABLE CIRCUIT'S EXTERNAL FIELD WIRING. WIRING BETWEEN THE CONTROL PANEL AND MASTER BOX SHALL BE ENCLOSED IN AN APPROVED RACEWAY.

ARTICLE IV
CONTROL EQUIPMENT

1. A DRILL SWITCH SHALL BE PROVIDED FOR SCHOOLS, HOSPITALS, NURSING HOMES, PLACES OF ASSEMBLY OR OTHER HIGH LIFE HAZARD OCCUPANCIES AND FOR THOSE OCCUPANCIES WHERE A FIRE DRILL PROGRAM IS REQUIRED.
2. THE CONTROL PANEL SHALL BE MARKED "FIRE ALARM CONTROL" WITH TWO (2) INCH HIGH LETTERS WHITE ON RED OR RED ON WHITE. REMOTE ANNUNCIATORS SHALL BE MARKED "FIRE ALARM" WITH AT LEAST ONE-HALF (1/2) INCH LETTERS, WHITE ON RED OR RED ON WHITE. IF THE FIRE ALARM CONTROL PANEL IS LOCATED IN A SEPARATE OR CONCEALED SPACE, A SIGN SHALL BE PROVIDED ON THE ENTRANCE DOOR OR NEAR THE CONCEALED SPACE. THE SIGN SHALL HAVE THE SAME MARKINGS AS THE CONTROL PANEL AND SHALL READ "FIRE ALARM SYSTEM".

3. THE MASTER FIRE ALARM BOX DISCONNECT SWITCH SHALL BE RENDERED INOPERATIVE IN THE FIRE ALARM CONTROL PANEL BY THE MANUFACTURER OR HIS REPRESENTATIVE.
4. WHEN THE MULTIPLEX OR NETWORK MODE IS USED, THE INDIVIDUAL CONTROL UNITS (TRANSPONDERS) ARE NOT TO EXCEED MANUFACTURER'S LIMITATIONS, AND SHALL BE CAPABLE OF OPERATING AS A STAND ALONE FIRE ALARM SYSTEM INCLUDING DETECTION AND EVACUATION SIGNALING WITH REQUIRED BATTERY BACKUP. DOCUMENTATION OF A SIGNALING PATH EVALUATION SHALL BE PROVIDED AT TIME OF PERMIT APPLICATION SUBMITTAL BY THE FIRE ALARM DESIGNER REGARDING THE SIGNALING PATH(S) RELIABILITY AND INTEGRITY AS REQUIRED BY NFPA 72. EACH ZONE ON SUCH SYSTEMS SHALL HAVE LOCAL AUDIO CAPABILITY IF THE BUILDING FIRE ALARM SYSTEM IS REQUIRED TO HAVE AN AUDIO EVACUATION SIGNALING SYSTEM. THE MULTIPLEX CONTROL UNIT'S COMMUNICATION RISER SHALL BE WIRED IN A CLASS "A" OR "X" FASHION. SURVIVABILITY SHALL BE AS REQUIRED PER NFPA 72.
5. EACH MULTIPLEX SYSTEM SHALL HAVE AS A RESERVE AT LEAST ONE OF EACH CPU AND REMOTE CONTROL PANEL PRINTED CIRCUIT BOARDS. OTHER BOARDS FOR PERFORMING SYSTEM FUNCTION MAY BE REQUIRED TO BE IN RESERVE. THE TERM IN RESERVE SHALL MEAN THAT THE DEVICES ARE STORED AT THE FIRE ALARM CONTROL PANEL.
6. BATTERY BACKUP SHALL BE PROVIDED AS REQUIRED BY NFPA 72. UNLESS OTHERWISE PERMITTED THE BATTERY SHALL BE THE SEALED LEAD ACID TYPE OF LEAD CADMIUM. IT MUST BE ASSUMED THAT THE BATTERY WILL BE THE ONLY SUPPLY AVAILABLE TO THE SYSTEM UPON THE LOSS OF PRIMARY POWER.
7. EMERGENCY LIGHTING SUFFICIENT FOR A MINIMUM OF NINETY (90) MINUTES SHALL BE PROVIDED TO LIGHT THE MAIN CONTROL CABINET AREA. THE EMERGENCY POWER SUPPLY SHALL BE AN APPROVED RECHARGEABLE BATTERY TYPE.

ARTICLE V

SPRINKLER/STANDPIPE/SUPPRESSION SYSTEMS

1. THE AUTOMATIC EXTINGUISHMENT SYSTEM SHALL MEET THE REQUIREMENTS OF APPLICABLE REFERENCE STANDARDS. THE OPERATION OF ANY AUTOMATIC EXTINGUISHMENT SYSTEM SHALL CAUSE ALARM INITIATION ON THE BUILDING ALARM SYSTEM ON A DEDICATED SEPARATE ZONE.

2. SPRINKLER ALARM SWITCHES SHALL NOT BE ALLOWED ON RETARD CHAMBERS EXCEPT FOR THE OPERATION OF LOCAL ELECTRIC ALARM DEVICES.
3. THE ALARM DEVICE ON WET SPRINKLER SYSTEM SHALL BE INSTALLED ON THE ALARM LINE OF THE ALARM CHECK VALVE AHEAD OF ANY SHUT OFF DEVICE, OR BE MAIN LINE PADDLE VANE DEVICES. ALL WATERFLOW ALARM DETECTING DEVICES SHALL BE EQUIPPED WITH A RETARD TIMING FEATURE, EXCEPT WHEN AN EXCESS PRESSURE PUMP IS USED. THESE DEVICES SHALL BE MADE TO INDICATE THE FLOW OF WATER IN A SPRINKLER SYSTEM BY AN ALARM WITHIN NINETY (90) SECONDS AFTER A FLOW OF WATER EQUAL OR GREATER THAN THAT FROM A SINGLE SPRINKLER OF THE SMALLEST ORIFICE SIZE INSTALLED IN THE SYSTEM. PADDLE TYPE INDICATORS SHALL NOT BE INSTALLED IN DRY PIPE, PRE-ACTION OR DELUGE SYSTEMS.
4. IN AREAS WHERE SURGES IN WATER PRESSURE ARE NORMAL, AN EXCESS PRESSURE PUMP TO MAINTAIN PRESSURE AT A LEVEL SUITABLE TO SUPPRESS SUCH SURGES ON THE INTERIOR SPRINKLER SYSTEM SHALL BE PROVIDED.
5. A TAMPER SWITCH SHALL BE INSTALLED ON EACH VALVE TO INDICATE AN OFF NORMAL POSITION ON THE SYSTEM ANNUNCIATOR. TEST VALVES SHALL BE PROVIDED ON EACH SPRINKLER ZONE. THE TEST VALVE SHALL BE PROVIDED AT THE END OF EACH SPRINKLER ZONE ON A SYSTEM FED BY A SINGLE RISER. THE TEST VALVE SHALL PROVIDE A FLOW EQUAL TO THE OPERATION OF A SINGLE SPRINKLER HEAD.
6. THE OPERATION AND STATUS OF THE BUILDING FIRE PUMP SHALL BE SUPERVISED, ON SEPARATE ALARM ZONES FOR PUMP RUNNING, PHASE REVERSAL AND PRIMARY POWER FAILURE, INCLUDING OFF NORMAL POSITION OF THE DISCONNECT SWITCH.
7. ALL FIRE SERVICE MAINS PROVIDING THE REQUIRED WATER SUPPLY FOR SPRINKLER AND/OR STANDPIPE SYSTEMS SHALL BE PROVIDED WITH A LOW PRESSURE SUPERVISORY DEVICE. THE DEVICE SHALL BE INSTALLED BETWEEN THE PUBLIC WATER SYSTEM AND THE SUPPLY SIDE OF ANY BACKFLOW OR DOUBLE CHECK EQUIPMENT. THE LOW PRESSURE SUPERVISORY DEVICE SHALL ANNUNCIATE BOTH AN AUDIBLE AND VISUAL SIGNAL AT THE FIRE ALARM CONTROL PANEL AND REMOTE ANNUNCIATORS; AND IF APPLICABLE, TO THE APPROVED CENTRAL STATION FACILITY. WATER SUPPLY PRESSURES LESS THAN THE SPRINKLER/STANDPIPE WATER DEMAND SHALL, CONSTITUTE THE LOW PRESSURE SETTING OF THE SUPERVISORY DEVICE AND SHALL CONSIDER POTENTIAL PRESSURE SURGES/DROPS CAUSED BY

NORMAL USAGE OF THE PUBLIC WATER SUPPLY. THE FIRE MARSHAL SHALL HAVE FINAL APPROVAL OF THE PRESSURE SETTING. THE LOW PRESSURE SUPERVISORY DEVICE SHALL BE ACCESSIBLE FOR MAINTENANCE AND CALIBRATION. AN ACCESSIBLE WATER PRESSURE GAUGE SHALL BE INSTALLED WITH THE LOW PRESSURE SUPERVISORY DEVICE.

ARTICLE VI

MANUAL/AUTOMATIC DETECTION AND ANNUNCIATION

1. ALL MANUAL STATIONS SHALL HAVE THE INSTRUCTIONS FOR THE OPERATION OF THE STATION CLEARLY IMPRINTED ON EACH STATION IN CLEAR ONE-HALF (1/2) INCH WHITE LETTERING AND ALL WIRING SHALL BE TERMINATED ON TERMINAL BLOCKS. MANUAL STATIONS IN PUBLIC AREAS SHALL, AT THE OPTION OF THE FIRE MARSHAL, HAVE AN ACCEPTED PROTECTION COVER WITH AN INTEGRAL SOUNDING DEVICE.
2. REMOVAL OF A SMOKE DETECTOR WILL NOT INTERFERE WITH THE TRANSMISSION OF SIGNAL FROM MANUAL STATIONS, WATERFLOW SWITCHES AND OTHER INITIATING DEVICES.
3. SMOKE DETECTORS LOCATED IN OR WITHIN TEN (10) FEET OF AN ELEVATOR LOBBY SHALL HAVE AN OBSCURATION RATING SENSITIVITY OF NOT LESS THAN 3%/FT FOR PHOTOELECTRIC AND 1.5%/FT FOR IONIZATION DETECTORS UNLESS ALARM VERIFICATION OR TWO CROSS-ZONED DETECTORS ARE UTILIZED, IN WHICH CASE MORE SENSITIVE DETECTORS MAY BE USED WITH PRIOR APPROVAL OF THE BOSTON FIRE DEPARTMENT. WHEN SAID SMOKE DETECTOR(S) ARE USED FOR ELEVATOR RECALL IT SHALL BE FOUR (4) WIRE POWERED TYPE SMOKE DETECTOR OR BE ON A SEPARATE ZONE OR AN ADDRESSABLE SYSTEM WITH AN OUTPUT BY POINT OR ZONE. (TWO (2) WIRE SMOKE DETECTORS WILL BE ALLOWED IN AN ADDRESSABLE SYSTEM.)
4. SMOKE DETECTOR SENSITIVITY SHALL NOT BE LESS THAN 3%/FT FOR PHOTOELECTRIC AND 1.5%/FT FOR IONIZATION DETECTORS.

NOTE: ANALOG ADDRESSABLE FIRE ALARM SYSTEMS THAT MONITOR INDIVIDUAL DETECTOR SENSITIVITY AND PROVIDE LOCAL PRE-ALARM INDICATION OF DETECTORS APPROACHING THEIR ALARM THRESHOLD MAY BE CONSIDERED AN ACCEPTABLE ALTERNATIVE TO 3%/FT PHOTOELECTRIC OR 1.5%/FT IONIZATION DETECTORS, SUBJECT TO THE APPROVAL OF THE FIRE MARSHAL.

5. USE OF ALARM VERIFICATION FOR SMOKE DETECTORS SHALL BE SUBJECT TO APPROVAL BY THE FIRE MARSHAL.
6. ALL SPOT TYPE SMOKE AND HEAT DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 72.
7. BEAM TYPE SMOKE DETECTORS SHALL BE USED IN ATRIUMS AND ARE PERMITTED IN OTHER OPEN AREAS SUCH AS BALLROOMS, CORRIDORS, EXHIBIT AREAS, CHURCHES, ETC.
8. SMOKE DETECTORS, IN AREAS UNDER CONSTRUCTION, SHALL NOT BE INSTALLED UNTIL ALL CONSTRUCTION ACTIVITIES HAVE CONCLUDED EXCEPT AS REQUIRED FOR BUILDING OCCUPANCY AND APPROVED BY THE FIRE MARSHAL.
9. IN RENOVATION WORK, WHICH INCLUDES EXISTING SMOKE DETECTORS, THE SMOKE DETECTORS SHALL BE REPLACED DURING RENOVATIONS BY APPROPRIATE HEAT DETECTORS ONLY IF THE SMOKE DETECTORS DO NOT PERFORM A FIRE SAFETY FUNCTION, I.E. SMOKE CONTROL, ELEVATOR RECALL, ETC UNLESS OTHERWISE APPROVED BY THE FIRE MARSHAL. IN FULLY SPRINKLERED AREAS SPRINKLER HEADS MAY SERVE AS HEAT DETECTORS. WHEN SMOKE DETECTORS ARE REMOVED CIRCUIT INTEGRITY SHALL BE MAINTAINED. WHEN RENOVATION WORK IS COMPLETED SMOKE DETECTORS MUST BE REINSTALLED.

NOTE: A SMOKE DETECTOR COVER MAY BE PERMITTED BY THE FIRE MARSHAL UNDER CERTAIN CONDITIONS. A BAGGING PERMIT WILL BE REQUIRED FROM THE BOSTON FIRE DEPARTMENT.

10. SELF-RESTORING HEAT DETECTORS SHALL NOT BE USED UNLESS INDIVIDUALLY ANNUNCIATED.
11. LAUNDRY ROOMS AND BOILER ROOMS SHALL NOT HAVE SMOKE DETECTORS INSTALLED. THESE AREAS SHALL BE PROTECTED BY AN AUTOMATIC SPRINKLER SYSTEM OR HEAT DETECTORS. MACHINE ROOMS, EXCLUDING ELEVATOR MACHINE ROOMS, SHALL BE PROTECTED BY SPRINKLER SYSTEM OR HEAT DETECTORS AND IN ALL CASES SHALL HAVE AT LEAST ONE (1) SMOKE DETECTOR.
12. THE ELECTRICAL ROOMS, TELEPHONE ROOMS, AND ELEVATOR MACHINE ROOMS SHALL HAVE A SMOKE DETECTOR WITH REMOTE ALARM INDICATION IN AN AREA ACCEPTABLE TO THE FIRE DEPARTMENT. THE ELECTRICAL ROOMS SHALL NOT HAVE SPRINKLER HEADS EXCEPT AS REQUIRED PER 780 CMR.

13. THE ANNUNCIATOR FOR THE FIRE ALARM SYSTEM SHALL BE LOCATED AT A POINT APPROVED BY THE FIRE MARSHAL. ALL LABELING SHALL BE PERMANENT IN NATURE AND SHALL BE APPROVED BY THE BOSTON FIRE DEPARTMENT PRIOR TO SYSTEM ACCEPTANCE.
14. ANNUNCIATORS SHALL BE LISTED FOR USE WITH THE SYSTEM INVOLVED. NEGATIVE ANNUNCIATION SHALL NOT BE PERMITTED. HOWEVER, NON-LISTED ANNUNCIATORS MAY BE ACCEPTED SUBJECT TO APPROVAL BY THE FIRE MARSHAL AS LONG AS THE ANNUNCIATOR DOES NOT INTERFERE WITH THE OPERATION OF THE SYSTEM.
15. ALL REMOTE ANNUNCIATORS SHALL HAVE BOTH AUDIBLE AND VISUAL TROUBLE INDICATIONS. SILENCING CAPABILITY SHALL ONLY BE LOCATED AT THE MAIN CONTROL CABINET.
16. THE COLOR, TRIM AND CONSTRUCTION OF ALL FIRE ALARM CONTROL PANELS AND ANNUNCIATORS SHALL BE RED.
17. ALARM SOUNDING APPLIANCES SHALL BE CLEARLY HEARD AND IN NO CASE BE LESS THAN FIFTEEN (15) DECIBELS ABOVE AMBIENT NOISE LEVELS FOR AREAS LISTED IN NFPA 72, EXCEPT THAT A MINIMUM SEVENTY-FIVE (75) DECIBELS AT PILLOW LEVEL BE MEASURED IN ALL OCCUPANCIES WHERE SLEEPING ACCOMMODATIONS EXIST.

NOTE: IF AMBIENT NOISE LEVEL IS EXTRAORDINARILY HIGH, THEN A STROBE OR ROTATING BEACON MAY BE ACCEPTABLE WITH THE APPROVAL OF THE FIRE MARSHAL.

18. SYSTEMS USING BELLS, HORNS, CHIMES AND OTHER NON-VOICE TYPE SIGNALS SHALL BE CAPABLE OF SOUNDING ALL CONNECTED SIGNALING DEVICES AS REQUIRED BY NFPA 72 OR OTHER REQUIRED CODES.
19. ELEVATOR RECALL SHALL COMPLY WITH THE REQUIREMENTS OF 524 CMR AND NFPA 72.
20. REQUIRED CARBON MONOXIDE ALARMS AND DETECTION SYSTEMS SHALL BE INSTALLED IN COMPLIANCE WITH 527 CMR 31 AND/OR 780 CMR.

ARTICLE VII

SYSTEM OPERATING CHARACTERISTICS

1. FIRE ALARM SYSTEMS SHALL BE DIVIDED INTO SIX COMPONENTS FOR THE PURPOSE OF THIS REGULATION. THEY ARE:

FIRE DEPARTMENT NOTIFICATION SYSTEM

ALARM INITIATING SYSTEM

EVACUATION SIGNALING SYSTEM

FIRE DEPARTMENT COMMUNICATIONS SYSTEM

SMOKE CONTROL SYSTEMS

EMERGENCY POWER SUPPLY

2. THE EVACUATION SIGNAL SHALL CONSIST OF TWO COMPONENTS, AUDIBLE AND VISUAL. IN THIS REGULATION ANY REFERENCE TO THE EVACUATION SIGNAL SHALL BE CONSTRUED TO MEAN BOTH THE AUDIBLE AND VISUAL COMPONENTS OF THE SIGNAL.
3. ON EACH FLOOR OF THE BUILDING, ALL STAIRWELLS SHALL BE IDENTIFIED AS TO STAIRWAY NUMBER AND FLOORS (E.G. STAIRWAY A, FLOOR 4).
4. THE SYSTEM SHALL PROVIDE MEANS TO DETECT FIRE CONDITIONS WITHIN A PROTECTED PROPERTY, TRANSMIT THE ALARM TO THE FIRE DEPARTMENT, ALERT BUILDING OCCUPANTS, TO SUPERVISE EACH SYSTEM FOR CONDITIONS WHICH WOULD IMPAIR PROPER SYSTEM OPERATION AND TO ANNUNCIATE SUCH ABNORMAL CONDITIONS.
5. EXCEPT AS PERMITTED BY THE FIRE MARSHAL THE OPERATION OF ANY ALARM INITIATING DEVICE SHALL CAUSE THE EVACUATION ALARM TO SOUND AND BE DISPLAYED ON ALL EVACUATION SIGNALING DEVICES CONNECTED TO THE SYSTEM EXCEPT AS REQUIRED BY 780 CMR FOR HIGH RISE BUILDINGS.
6. SYSTEMS DESIGNED TO SOUND/DISPLAY EVACUATION SIGNALS ONLY IN DESIGNATED AREAS SHALL BE PROVIDED WITH MEANS TO SOUND/DISPLAY THE EVACUATION SIGNAL ON ALL CONNECTED DEVICES. THIS MEANS SHALL BE PROVIDED AT THE FIRE ALARM CONTROL PANEL.

7. AUDIBLE/VISUAL DEVICES SHALL BE HORNS, BELLS, CHIMES, APPROVED LIGHTS OR SPEAKERS LISTED FOR FIRE ALARM SERVICE EXCEPT AS OTHERWISE PERMITTED.
8. VISUAL SIGNALING DEVICES SHALL BE APPROVED FOR THE PURPOSE AND SHALL OPERATE IN THOSE AREAS WHERE THE EVACUATION SIGNALING IS REQUIRED TO BE INDICATED AND SHALL HAVE THE WORD "FIRE" PERMANENTLY INSCRIBED ON THEIR SURFACES EXCEPT AS REQUIRED BY NFPA 72. VISUAL ALARM SIGNALS SHALL BE INSTALLED AS REQUIRED PER 521 CMR, 780 CMR, AND NFPA 72.
9. ANNUNCIATION OF ALL ALARMS SHALL BE PROVIDED AT A POINT APPROVED BY THE FIRE MARSHAL. ALARM, TROUBLE, AND SUPERVISORY ZONES ARE SUBJECT TO THE APPROVAL OF THE ENGINEERING UNIT OF THE BOSTON FIRE DEPARTMENT. WHEN ANNUNCIATION IS REQUIRED ALL BUILDINGS HAVING AREA SEPARATION WALLS SHALL BE ZONED FOR EACH SEPARATE AREA (E.G. TOWNHOUSE STYLE CONSTRUCTION, HOSPITALS, ETC.). STRIP MALL TYPE BUILDINGS SHALL BE ZONED FOR EACH TENANT IN THE BUILDING.
10. ALL POWER SUPPLIES/AMPLIFIERS SHALL BE SIZED TO ACCOMMODATE ALL SIGNALS THROUGHOUT THE BUILDING IN ALARM PLUS A RESERVE CAPACITY OF A MINIMUM OF FIFTY (50) PERCENT OR A RESERVE OF ONE (1) WATT PER 1000 SQUARE FEET OF FLOOR AREA, WHICHEVER IS GREATER.
11. TAMPER PROOF MOUNTING HARDWARE FOR VARIOUS APPLIANCES WITHIN THE SYSTEM SHALL BE REQUIRED IN PUBLIC AREAS.
12. AN OUTDOOR LISTED RED STROBE LIGHT, ACCEPTABLE TO THE FIRE MARSHAL SHALL BE INSTALLED ON THE OUTSIDE OF THE PROTECTED PROPERTY TO INDICATE THE BUILDING ENTRANCE NEAREST TO THE FIRE COMMAND CENTER OR THE FIRE ALARM ANNUNCIATOR.
13. FIRE ALARM SYSTEMS IN THEATERS AND OTHER SIMILAR PLACES OF PUBLIC ASSEMBLY EQUIPPED WITH A STAGE, SCREEN, ETC., SHALL, UPON THE EVENT OF AN ALARM, SHUTDOWN ALL PROJECTION UNITS AND ASSOCIATED SOUND EQUIPMENT AND BRING UP THE HOUSE LIGHTS FOR THE PURPOSE OF SAFE BUILDING EVACUATION. A-2NC OCCUPANCIES SHALL COMPLY WITH THE FIRE ALARM REQUIREMENTS OF THE MASSACHUSETTS STATE BUILDING CODE, 780 CMR.
14. SMOKE CONTROL SYSTEMS SHALL BE INSTALLED AND DESIGNED AS REQUIRED PER 780 CMR AND THE BOSTON FIRE PREVENTION CODE.

ARTICLE VIII
HIGH RISE OCCUPANCIES

1. AN ALARM AND COMMUNICATION SYSTEM SHALL BE PROVIDED AND INSTALLED TO SERVE THE FOLLOWING FUNCTIONS:

ALARM SIGNALING

EMERGENCY VOICE COMMUNICATIONS

FIRE DEPARTMENT COMMUNICATIONS

CONTROLS FOR SMOKE EVACUATION

2. THE OPERATION OF ANY SYSTEM SMOKE/HEAT DETECTOR, SPRINKLER WATERFLOW DEVICE, SPECIAL EXTINGUISHING SYSTEM OR MANUAL FIRE ALARM STATION SHALL AUTOMATICALLY:

- A. NOTIFY THE FIRE DEPARTMENT

- B. SOUND AN ALERT (PRE-SIGNAL) TONE

(THE ALERT (PRE-SIGNAL) TONE SHALL BE A 900-HERTZ TONE PULSED TO PRODUCE ONE (1) ROUND OF CODE 4 AT APPROXIMATELY ONE (1) SECOND INTERVALS)

- C. ACTIVATE THE RECORDED MESSAGE REGARDING THE EVACUATION PROCEDURE,

(THE ALARM AND COMMUNICATIONS SYSTEMS SHALL PROVIDE A PRE-RECORDED MESSAGE TO ALL REQUIRED AREAS. THE MESSAGE SHALL CONTAIN THE FOLLOWING INFORMATION: "ATTENTION PLEASE. THE SIGNAL TONE YOU HAVE JUST HEARD INDICATED A REPORT OF AN EMERGENCY IN THIS BUILDING. IF YOUR FLOOR EVACUATION SIGNAL SOUNDS AFTER THIS MESSAGE, WALK TO THE NEAREST STAIRWAY AND LEAVE THE FLOOR. WHILE THE REPORT IS BEING VERIFIED, OCCUPANTS ON OTHER FLOORS SHOULD AWAIT FURTHER INSTRUCTIONS".)

THIS MESSAGE SHALL BE REPEATED THREE TIMES.

A FEMALE VOICE SHALL BE USED FOR THIS MESSAGE.

- D. ACTIVATE THE EVACUATION SIGNAL ON THE FLOOR BELOW, FLOOR OF INCIDENT AND THE NEXT FLOOR ABOVE. (THE EVACUATION SIGNAL SHALL BE AS REQUIRED BY 780 CMR, MASSACHUSETTS STATE BUILDING CODE.).
 - E. INITIATE SMOKE CONTROL SYSTEMS (EXCEPTION – MANUAL PULL STATIONS ARE NOT REQUIRED TO INITIATE ZONED FLOOR-BY- FLOOR SMOKE CONTROL SYSTEMS).
3. ELEVATOR RECALL SHALL BE AS REQUIRED BY 524 CMR AND NFPA 72.
 4. THE SYSTEM SHALL BE ELECTRICALLY/ELECTRONICALLY SUPERVISED AGAINST COMPONENT FAILURE OF THE ENTIRE AUDIO PATH INCLUDING, BUT NOT LIMITED TO AMPLIFIERS, LOUDSPEAKER WIRING, SWITCHES AND ELECTRICAL CONTACTS AND SHALL DETECT OPENS, SHORTS, GROUNDS OR LOSS OF SIGNAL WHICH MIGHT IMPAIR THE FUNCTION OF THE SYSTEM.
 5. NO MORE THAN HALF THE LOUDSPEAKERS SERVING ANY FLOOR OR ZONE SHALL BE CONNECTED TO THE SAME RISER CIRCUIT.
 6. A FIREFIGHTER COMMUNICATION SYSTEM SHALL BE REQUIRED TO PROVIDE RADIO COMMUNICATIONS THROUGHOUT THE PROTECTED PREMISE IN ACCORDANCE WITH THE REQUIREMENTS OF THE BOSTON FIRE DEPARTMENT IN-BUILDING RADIO SPECIFICATION. A MAINTENANCE PLAN MUST BE MAINTAINED WHICH PROVIDES ANNUAL TESTING AND REPAIRS TO THE SYSTEM.
 7. A FIRE COMMAND CENTER FOR FIRE DEPARTMENT OPERATIONS SHALL BE PROVIDED IN A READILY ACCESSIBLE LOCATION APPROVED BY THE FIRE MARSHAL. IT SHALL CONTAIN , BUT NOT BE LIMITED TO, THE FOLLOWING AND AS REQUIRED BY 780 CMR:
 - A. THE ALARM SYSTEM ANNUNCIATION PANEL
 - B. THE MASTERBOX OR CENTRAL STATION TRANSMITTER
 - C. VOICE COMMUNICATION SYSTEMS CONTROLS
 - D. FIRE PUMP STATUS INDICATORS:
 - E. “DEDICATED EMERGENCY TELEPHONE”
 - F. STATUS INDICATORS FOR ALL ELEVATORS

- G. STATUS INDICATORS AND CONTROLS FOR AIR HANDLING SYSTEMS AND FIREFIGHTER'S SMOKE CONTROL PANEL (FSCP). A GRAPHIC SCHEMATIC OF THE FSCP APPROVED BY THE DESIGN PROFESSIONAL SHALL BE SUBMITTED AT TIME OF PERMIT APPLICATION.
- H. CONTROLS FOR UNLOCKING ALL STAIRWAY DOORS
- I. SPRINKLER VALVE STATUS AND WATERFLOW DETECTOR ANNUNCIATING PANELS
- J. EMERGENCY POWER, LIGHT AND EMERGENCY SYSTEM CONTROLS AND STATUS INDICATORS
- K. EMERGENCY BATTERY-POWERED LIGHTING SUFFICIENT TO PROVIDE AT LEAST EIGHT (8) HOURS LIGHTING
- L. OTHER REQUIREMENTS OF 780 CMR, SECTION 911
- M. IN-BUILDING RADIO EQUIPMENT AS DIRECTED BY THE BOSTON FIRE DEPARTMENT RADIO SUPERVISOR

8. ALARM SEQUENCE

- 1. ALERT (PRE-SIGNAL) TONE
- 2. RECORDED MESSAGE REGARDING EVACUATION PROCEDURE
- 3. EVACUATION SIGNAL TO FLOOR BELOW, FLOOR OF ORIGIN AND FLOOR ABOVE
- 4. GENERAL EVACUATION SIGNAL, IF REQUIRED

ARTICLE IX

HOTEL SYSTEMS

- 1. SPECIFIC INSTRUCTIONS SHALL BE POSTED IN ALL GUEST ROOMS SHOWING HOW TO REPORT A FIRE AND WHAT ACTION MUST BE TAKEN.
- 2. IN ORDER TO ACCOMPLISH NOTIFICATION OF OCCUPANTS AND THE FIRE DEPARTMENT AND IMPLEMENT THE EVACUATION PLAN, A FIRE ALARM SYSTEM IS REQUIRED UNDER ARTICLE XII, SECTION

12.02 OF THE BOSTON FIRE PREVENTION CODE AND SHALL COMPLY WITH THE FOLLOWING CRITERIA AND AS REQUIRED BY 780 CMR:

- A. DIRECT MASTER BOX CONNECTION TO THE FIRE DEPARTMENT SO THAT ANY ACTIVATION OF THE SYSTEM INDICATING A FIRE CONDITION WILL CAUSE THE TRANSMISSION OF AN ALARM TO THE FIRE DEPARTMENT.
- B. SPECIAL MANUAL FIRE ALARM STATIONS SHALL BE LOCATED AT THE TELEPHONE SWITCHBOARD AND AT OTHER SUCH LOCATIONS AS MAY BE DESIGNATED BY THE ENGINEERING UNIT OR SUPERVISOR OF INTERNAL SYSTEMS FOR THE PURPOSE OF INITIATING THE GENERAL EVACUATION ALARM AND TO CAUSE THE TRANSMISSION OF THE ALARM TO THE FIRE DEPARTMENT IN THE EVENT AN ALARM HAD NOT ALREADY BEEN TRANSMITTED. THE OPERATION OF THESE SPECIAL MANUAL FIRE ALARM STATIONS SHALL OVERRIDE ANY OTHER FUNCTION OF THE FIRE ALARM SYSTEM.
- C. SINGLE OR MULTIPLE STATION SMOKE DETECTORS IN GUEST ROOMS IN ACCORDANCE WITH 780 CMR.
- D. SMOKE DETECTORS IN HALLWAYS, CONNECTED TO BUILDING ALARM SYSTEM.
- E. MANUAL PULL STATIONS IN HALLWAYS, CONNECTED TO BUILDING ALARM SYSTEM.
- F. MANUAL PULL STATIONS AND HEAT DETECTORS IN OTHER AREAS SUCH AS GARAGES, UTILITY FLOORS, ETC., CONNECTED TO THE BUILDING ALARM SYSTEM.
- G. IN BUILDINGS SEVENTY (70) FEET OR LESS IN HEIGHT, THE EVACUATION ALARM SHALL BE AN "ALL CALL" OR NON-SELECTIVE TYPE SYSTEM.
- H. IN BUILDINGS OVER SEVENTY (70) FEET IN HEIGHT, THE EVACUATION ALARM SHALL BE CAPABLE OF SELECTIVE SIGNALING TO THE GUEST ROOM FLOORS AND IN ACCORDANCE WITH REQUIREMENTS OF 780 CMR.
- I. EVACUATION ALARM OPERATION
 - 1) IN BUILDINGS REFERRED TO IN PARAGRAPH (G.), THE OPERATION OF ANY DEVICE CONNECTED TO THE BUILDING ALARM SYSTEM SHALL CAUSE THE SOUNDING OF THE TEMPORAL 3 SIGNAL ON ALL DEVICES CONNECTED TO THE EVACUATION SYSTEM.

- 2) IN BUILDINGS REFERRED TO IN PARAGRAPH (H.), THE OPERATION OF ANY DEVICE CONNECTED TO THE BUILDING ALARM SYSTEM SHALL CAUSE THE SOUNDING OF THE EVACUATION ALARM ON THE FLOOR OF ORIGIN OF THE ALARM, THE FLOOR BELOW AND THE FLOOR ABOVE.
 - 3) GUESTROOM SINGLE OR MULTIPLE STATION SMOKE DETECTORS THAT ARE CONNECTED TO THE FIRE ALARM SYSTEM SHALL PERFORM AS LOCAL DETECTORS FOR NOTIFYING THE OCCUPANTS OF THE ROOM AND SHALL NOTIFY THE MAIN FIRE ALARM CONTROL PANEL PER 780 CMR REQUIREMENTS
- J. IN ADDITION TO THE FOREGOING, EACH HOTEL SHALL MAINTAIN THE ESTABLISHED SPECIAL TELEPHONE NUMBER ON THE HOTEL TELEPHONE SYSTEM TO-ENABLE GUESTS AND OTHERS IN THE HOTEL TO REPORT FIRES OR OTHER EMERGENCIES. THIS SPECIAL TELEPHONE NUMBER SHALL APPEAR ON THE TELEPHONE SWITCHBOARD AS AN EXTENSION OR TRUNK TELEPHONE LINE. THIS SPECIAL TELEPHONE NUMBER SHALL BE RECEIVED AT OTHER SUCH LOCATIONS AS MAY BE DESIGNATED BY THE FIRE MARSHAL. THE TELEPHONE EXTENSION OR TRUNK LINE ON THE SWITCHBOARD SHALL BE IDENTIFIED AS TO FUNCTION AND ITS DESIGNATING LIGHT SHALL BE RED. WHERE THIS TELEPHONE NUMBER IS EXTENDED TO OTHER LOCATIONS IT SHALL BE CLEARLY IDENTIFIED AS TO ITS FUNCTION. CONSIDERATION SHALL BE GIVEN TO KEEPING THIS SPECIAL NUMBER TO AS FEW DIGITS AS POSSIBLE TO FACILITATE EASE OF DIALING. THIS SPECIAL NUMBER SHALL BE PROMINENTLY DISPLAYED ON ALL TELEPHONE SETS CONNECTED TO THE HOTEL TELEPHONE SYSTEM.
- K. BEGINNING JULY 1, 2009, MULTI-LINE TELEPHONE SYSTEMS NEWLY INSTALLED OR SUBSTANTIALLY RENOVATED SHALL COMPLY WITH APPLICABLE SECTIONS OF 560 CMR 4.00.

ARTICLE X
TESTING OF SYSTEMS

1. EACH CONNECTED FIRE ALARM SYSTEM SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 72. WATER BASED FIRE PROTECTION SHALL BE TESTED AND MAINTAINED IN ACCORDANCE WITH NFPA 25. OTHER FIRE SUPPRESSION SYSTEMS SHALL BE TESTED AND MAINTAINED IN ACCORDANCE WITH THEIR APPLICABLE NFPA STANDARD. FIRE ALARM TROUBLE SIGNALS RECEIVED BY A CENTRAL STATION, A PROPRIETARY SUPERVISING STATION OR WHEN PERMITTED AT AN APPROVED CONSTANTLY ATTENDED LOCATION SHALL BE RESPONDED TO BY THE FIRE ALARM SERVICE COMPANY WITHIN FOUR (4) HOURS. FIRE ALARM SYSTEMS THAT ARE FOUND TO BE INOPERABLE BY THE RESPONDING FIRE ALARM TECHNICIAN OR ELECTRICIAN SHALL BE REPORTED IMMEDIATELY TO THE FIRE ALARM DIVISION AT (617) 343-2880.
2. IF A SHORTER TEST PERIOD IS DESIRED AN APPLICATION MUST BE MADE TO THE FIRE MARSHAL. APPLICATION SHALL INCLUDE LENGTH OF PERIOD AND NUMBER OF DEVICES AND CIRCUITS TO BE TESTED EACH PERIOD.
3. AT LEAST TWENTY-FIVE PERCENT (25%) OF THE DEVICES SHALL BE TESTED WITH THE SYSTEM OPERATING ON THE EMERGENCY POWER SUPPLY.
4. EACH MANUAL STATION OR TRANSMITTER SHALL BE TESTED AT LEAST ONCE EACH YEAR. IN EACH TEST PERIOD, AT LEAST ONE (1) ALARM-INITIATING DEVICE SHALL BE TESTED ON EACH ALARM CIRCUIT. REQUESTS FOR ANY VARIANCES SHALL BE ADDRESSED TO THE FIRE MARSHAL.
5. ALL FIRE DETECTORS, EXCEPT AS OTHERWISE REQUIRED BY NFPA 72, ASSOCIATED WITH AN INTERIOR FIRE ALARM SYSTEM SHALL BE TESTED AT LEAST ONCE IN A TWELVE (12) MONTH PERIOD WITH EQUAL QUANTITIES IN EACH TEST PERIOD, IF A SHORTER TEST PERIOD HAS BEEN APPROVED. DETECTORS SHALL BE TESTED ACCORDING TO MANUFACTURER'S RECOMMENDATION.
6. SMOKE DETECTOR TESTING, SENSITIVITY AND CLEANING SHALL BE IN ACCORDANCE WITH NFPA 72.
7. FUSIBLE LINK DETECTORS SHALL BE UNSCREWED FROM THEIR HOLDERS TO TEST ALARM-INITIATING CAPABILITY.

8. THE TEST FOR SPRINKLER ZONES SHALL BE A FLOW OF WATER EQUIVALENT TO THE FLOW FROM ONE (1) SPRINKLER HEAD.

9. ALL MAIN SPRINKLER WATERFLOW ALARMS AND ASSOCIATED TAMPER SWITCHES SHALL BE TESTED AS REQUIRED BY NFPA 72. FLOOR WATERFLOW AND ASSOCIATED TAMPER SWITCHES SHALL BE TESTED AS REQUIRED BY NFPA 72.

10. THE TESTING OF VOICE EVACUATION SIGNALING SYSTEMS SHALL BE DONE AS FOLLOWS:

THE INITIAL STEP SHALL BE TO DETERMINE ALARM SIGNAL OUTPUT TO THE EVACUATION SIGNALING SYSTEM. IT SHALL BE SUFFICIENT TO SOUND THE EVACUATION SIGNAL (SLOW WHOOP FOR EXISTING SYSTEMS OR TEMPORAL 3 FOR NEW SYSTEMS) FOR FOUR (4) PERIODS OF THE SIGNAL ON ANY CONNECTED EVACUATION SIGNALING DEVICE.

INTELLIGIBILITY REQUIREMENTS OF NFPA 72, FOR EXISTING APPROVED SYSTEMS NOT CAPABLE OF COMPLIANCE WITH THE SECOND STEP, AS DESCRIBED IN THE PARAGRAPH BELOW, SHALL BE AN EXTENDED TEST OF THE EVACUATION SIGNALING SYSTEM. THE EXTENDED TEST SHALL USE AN AUDIO SOURCE OTHER THAN THE EVACUATION SIGNAL GENERATOR. THE SOURCE MAY USE MUSIC AS ITS TEST MEDIUM. ALL DEVICES CONNECTED TO THE EVACUATION SIGNALING SYSTEM SHALL BE OBSERVED FOR PROPER INTELLIGIBLE REPRODUCTION OF THE SOURCE.

FOR NEW VOICE EVACUATION SYSTEMS THE SECOND STEP SHALL COMPLY WITH THE TEST REQUIREMENTS FOR INTELLIGIBILITY AS REQUIRED BY NFPA 72.

11. NOTIFICATION SHALL BE GIVEN TO THE OCCUPANTS OF THE BUILDING THAT A FIRE ALARM TEST WILL BE CONDUCTED AND THE PERIOD OF TIME IN WHICH IT WILL BE CONDUCTED. THIS NOTIFICATION SHALL CONSIST OF AN ANNOUNCEMENT ON THE VOICE EVACUATION SIGNALING SYSTEM, IF AVAILABLE, AND THE POSTING OF SIGNS AT THE MAIN ELEVATOR LOBBIES AND ALL MAIN ENTRANCES TO THE BUILDING THAT THE TEST IS BEING CONDUCTED. AT THE COMPLETION OF THE TEST AN ANNOUNCEMENT SHALL BE MADE STATING THAT THE FIRE ALARM TEST HAS BEEN COMPLETED.

12. THE SIGNS GIVING NOTIFICATION OF THE TEST SHALL CONTAIN INFORMATION ON ALTERNATE MEANS TO REPORT A FIRE IN THE BUILDING AND THE EXPECTED STARTING AND COMPLETION TIMES OF THE TEST. THIS SIGN SHALL HAVE A MINIMUM SIZE OF THREE QUARTER INCH (3/4") BLOCK LETTERS, RED ON WHITE OR WHITE ON RED AND INCLUDE THE FOLLOWING INSTRUCTIONS:

IF YOU WISH TO REPORT A FIRE DURING THE FIRE ALARM TEST, OPERATE THE NEAREST MANUAL FIRE ALARM STATION AND THEN USE A TELEPHONE TO CALL THE BOSTON FIRE DEPARTMENT AT 9-1-1 AND GIVE THE LOCATION OF THE FIRE.

THE TEST WILL BEGIN AT (TIME); THE TEST WILL BE COMPLETED AT (TIME).

THIS BUILDINGS ADDRESS IS (STREET NUMBER AND STREET NAME).

ALL SIGNS SHALL BE PROVIDED BY THE TESTING COMPANY.

13. OTHER INFORMATION INCLUDING INSTRUCTIONS ABOUT CALLING OTHER NUMBERS IN THE BUILDING MAY BE INCLUDED ON THE SIGN BUT SHALL NOT CONFLICT WITH THE ABOVE INSTRUCTIONS. THE PROPERTY OWNER SHALL PROVIDE INSTRUCTION AND TRAINING TO BUILDING OCCUPANTS ON THE USE OF TELEPHONE SYSTEMS REQUIRING SPECIAL KNOWLEDGE FOR MAKING 9-1-1 CALLS (I.E., MULTI-LINE TELEPHONE SYSTEMS).
14. DURING THE TEST, THE ALARM SERVICE COMPANY UNDER CONTRACT SHALL BE RESPONSIBLE TO MAKE PROVISIONS FOR THE ADEQUATE MONITORING OF THE SYSTEM FOR PROPER SUPERVISION AND TRANSMISSION OF ALARMS TO THE FIRE DEPARTMENT AND/OR CENTRAL STATION AS NECESSARY DURING THE PERIOD THE INTERNAL SYSTEM IS "OFF LINE" (PLUGGED OUT) TO THE MUNICIPALITY OR CENTRAL STATION.
15. ALL DEVICES SHALL BE TESTED ACCORDING TO A SCHEDULE. IF AN ALARM IS RECEIVED OUT OF SEQUENCE FROM A SCHEDULED TEST OR FROM A ZONE NOT SCHEDULED FOR TESTING THEN THE MASTER FIRE ALARM BOX SHALL BE OPERATED AND THE BUILDING OCCUPANTS NOTIFIED BY MEANS OF THE EVACUATION SIGNALING SYSTEM.
16. IN EACH TESTING PERIOD, AS REQUIRED BY NFPA 72, THE MASTER FIRE ALARM BOX SHALL BE TRANSMITTED TO THE FIRE ALARM OFFICE (FAO) ONCE. THE OPERATION OF THE MASTER BOX SHALL BE CAUSED BY THE OPERATION OF ANY ALARM INITIATING DEVICE CONNECTED TO THE SYSTEM.
17. TESTING OF SINGLE/MULTIPLE STATION SMOKE DETECTORS SHALL BE IN ACCORDANCE WITH NFPA 72. SUCH TESTS SHALL BE PERFORMED BY THE AUTHORIZED SERVICE COMPANY OR THE OWNER'S ELECTRICAL STAFF. IN ALL CASES A LOG OF TESTS SHALL BE MAINTAINED AND RETAINED FOR A MINIMUM OF TWO (2) YEARS.

18. ALL BUILDING CONTROL FUNCTIONS, SUCH AS SMOKE DAMPERS, ELEVATOR RECALL, ETC., SHALL BE TESTED AT LEAST ONCE IN A TWELVE-MONTH PERIOD. THE ELEVATOR RECALL OPERATION SHALL BE FULLY TESTED WITH A REPRESENTATIVE OF THE LICENSED ELEVATOR COMPANY SERVICING THE BUILDING AT LEAST ONCE IN EVERY TWELVE (12) MONTH PERIOD.

19. WHEN A MASTER BOX OR A CENTRAL STATION CONNECTED SYSTEM IS TO BE REMOVED FROM SERVICE FOR **SCHEDULED** TESTING OR REPAIRS, THE FIRE ALARM OFFICE SHALL BE NOTIFIED IN WRITING BY FAXING THE DESIGNATED NUMBER - (617) 343-3060, AND GIVING THE PROPER IDENTIFYING SIGNATURE OF THE TECHNICIAN, THE NAME OF THE QUALIFIED PERSON AT THE FIRE ALARM CONTROL PANEL, THE BUILDING ADDRESS, THE MASTER BOX NUMBER AND STATING THE REASONS FOR THE SYSTEM DISCONNECTION ALONG WITH THE ESTIMATED TIMES OF THE MASTER BOX TAKEN OUT OF SERVICE AND OF SERVICE RESTORATION. THE FIRE ALARM OFFICE SHALL BE NOTIFIED BY CALLING (617) 343-3805 WHENEVER THE BOX IS OUT OF SERVICE BEYOND 2 HOURS OF THE ESTIMATION. THE UL CENTRAL STATION MONITORING COMPANY WILL BE NOTIFIED WHEN A DIGITAL ALARM COMMUNICATIONS TRANSMITTER IS DISCONNECTED AND WHEN PLACED BACK IN SERVICE.

UNSCHEDULED, EMERGENCY MAINTENANCE REQUIRING THAT THE MASTER BOX BE TAKEN OUT OF SERVICE REQUIRES A CALL TO (617) 343-3805. STATE YOUR BOSTON FIRE DEPARTMENT IDENTIFYING SIGNATURE, ALARM COMPANY NAME, MASTER BOX NUMBER AND THAT YOU ARE REQUESTING TO TAKE THE BOX OUT OF SERVICE FOR EMERGENCY MAINTENANCE. AN ESTIMATED TIME BACK IN SERVICE MUST BE PROVIDED. THE FIRE ALARM OFFICE SHALL BE NOTIFIED BY CALLING (617) 343-3805 WHENEVER THE BOX IS OUT OF SERVICE BEYOND 2 HOURS OF THE ESTIMATION. SCHEDULED MAINTENANCE REQUESTS MADE BY TELEPHONE ARE NOT ACCEPTED.

20. A REPORT OF DEFICIENCIES RESULTING FROM A TEST SHALL BE SUBMITTED TO THE FIRE MARSHAL. THE TEST SHALL INCLUDE THE FOLLOWING INFORMATION:

DATE OF TEST

LOCATION

MASTER FIRE ALARM BOX NUMBER/CENTRAL STATION PREMISE IDENTIFICATION NUMBER
(PIC)

COMPANY CONDUCTING TEST

NAME AND LICENSE # OF PERSON CONDUCTING TEST

NUMBER AND LOCATION OF DEVICES TESTED

LOCATION AND TYPE OF DEVICES FAILING TEST

CONDITION OF EMERGENCY POWER SUPPLY

21. IN-BUILDING RADIO SYSTEMS SHALL BE TESTED AS REQUIRED BY THE SUPERINTENDENT OF FIRE ALARM AND THE BOSTON FIRE DEPARTMENT IN-BUILDING RADIO SPECIFICATION.

ARTICLE XI

FIRE DEPARTMENT CONTACTS

QUESTIONS ON FIRE ALARM INSPECTIONS:

FIRE MARSHAL/SUPERVISOR OF INTERNAL SYSTEMS

BOSTON FIRE DEPARTMENT

1010 MASSACHUSETTS AVENUE, 4TH FLOOR

BOSTON, MA 02118

TEL (617) 343-2896

FAX (617) 343-3096

QUESTIONS REGARDING MUNICIPAL CONNECTIONS:

FIRE ALARM CONSTRUCTION SECTION

BOSTON FIRE DEPARTMENT

59 FENWAY

BOSTON, MA 02115-3700

TEL (617) 343-2897

FAX (617) 343-2053

MASTER BOX CODE WHEEL CUTTING AND TIMING:

FIRE ALARM MACHINE SHOP

BOSTON FIRE DEPARTMENT

115 SOUTHAMPTON ST.

BOSTON, MA 02118

TEL (617) 343-3518

FAX (617) 343-2084

INQUIRIES, APPLICATIONS, AND TESTING REQUIREMENTS REGARDING IN-BUILDING RADIO SYSTEMS

RADIO SUPERVISOR

BOSTON FIRE DEPARTMENT

59 FENWAY

BOSTON, MA 02115-3700

TEL (617) 343-2875

FAX (617) 343-3060

REPORTS OR QUESTIONS FROM SERVICE COMPANIES REGARDING EMPLOYEE STATUS; DEFICIENCY REPORTS, ETC-

FIRE MARSHAL/SUPERVISOR OF INTERNAL SYSTEMS

BOSTON FIRE DEPARTMENT

1010 MASSACHUSETTS AVENUE, 4TH FLOOR

BOSTON, MA 02118

TEL (617) 343-2896

FAX (617) 343-3096

QUESTIONS ABOUT FIRE ALARM PERMIT REQUIREMENTS

BOSTON FIRE DEPARTMENT

FIRE PREVENTION DIVISION/ENGINEERING UNIT

1010 MASSACHUSETTS AVENUE, 4TH FLOOR

BOSTON, MA 02118

TEL (617) 343- 2043

FAX (617) 343-2133

ARTICLE XII

REFERENCE STANDARDS

THE FOLLOWING IS A LIST OF REFERENCE STANDARDS THAT SHALL BE USED, BUT NOT NECESSARILY LIMITED TO, IN SYSTEM DESIGN, OPERATION, AND MAINTENANCE. THE REFERENCE STANDARDS USED SHALL BE THE LATEST EDITION OF THE STANDARD UNLESS MODIFIED BY THE STATE BUILDING CODE. NFPA IS THE NATIONAL FIRE PROTECTION ASSOCIATION.

NFPA 13

NFPA 20

NFPA 25

NFPA 72

NFPA 90A

NFPA 92A

NFPA 92B

NFPA 101

NFPA 1221

BOSTON FIRE PREVENTION CODE

COMMONWEALTH OF MASSACHUSETTS ELECTRICAL CODE

EMERGENCY LIGHTING CODE, COMMONWEALTH OF MASSACHUSETTS (780 CMR, 527 CMR 12)

CABLE SPECIFICATIONS, INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA)

CONSTRUCTION STANDARDS, FIRE ALARM DIVISION, BOSTON FIRE DEPARTMENT

BOSTON FIRE DEPARTMENT IN-BUILDING RADIO SPECIFICATIONS

OTHER STANDARDS AS REQUIRED BY LAW AND REGULATION