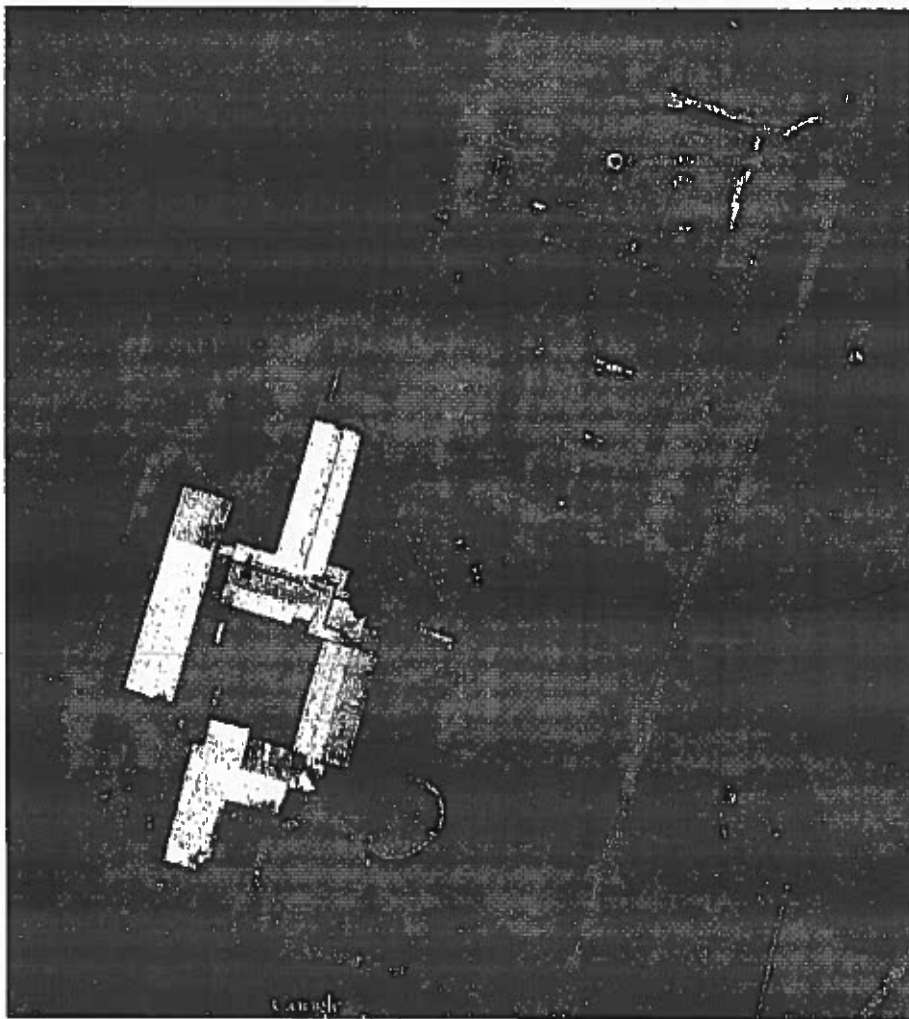




117 METRO CENTER BLVD | SUITE 1002
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FIRE ALARM SYSTEMS EVALUATION
BROOKLYN SCHOOLS
119 Gorman Rd, Brooklyn, CT



Prepared for:

Brooklyn Schools
119 Gorman Rd.
Brooklyn, CT 06234

September 19, 2014

1.0 BACKGROUND

Hughes Associates Inc. (hereafter referred to as "Hughes") was contracted by Brooklyn Schools to evaluate the existing fire alarm systems located throughout its campus located at 119 Gorman Road in Brooklyn, Connecticut.

The Brooklyn School's campus is comprised of both a Middle School building and an Elementary/Pre-School building. The Middle School building is a single story and contains classrooms as well as large assembly areas such as the gymnasium, cafeteria, and auditorium. The Elementary/Pre-School building has multiple sections that are connected by interior common corridors. This building is primarily a single story; however, some sections have basement levels that range in usage from mechanical and storage space to educational spaces such as classrooms. The Elementary/Pre-School building contains classrooms for both elementary education as well as pre-school, large assembly occupancies such as a gymnasium/auditorium, and the media center.

A site map indicating each of the buildings included in this report is shown in Figure 1 below:

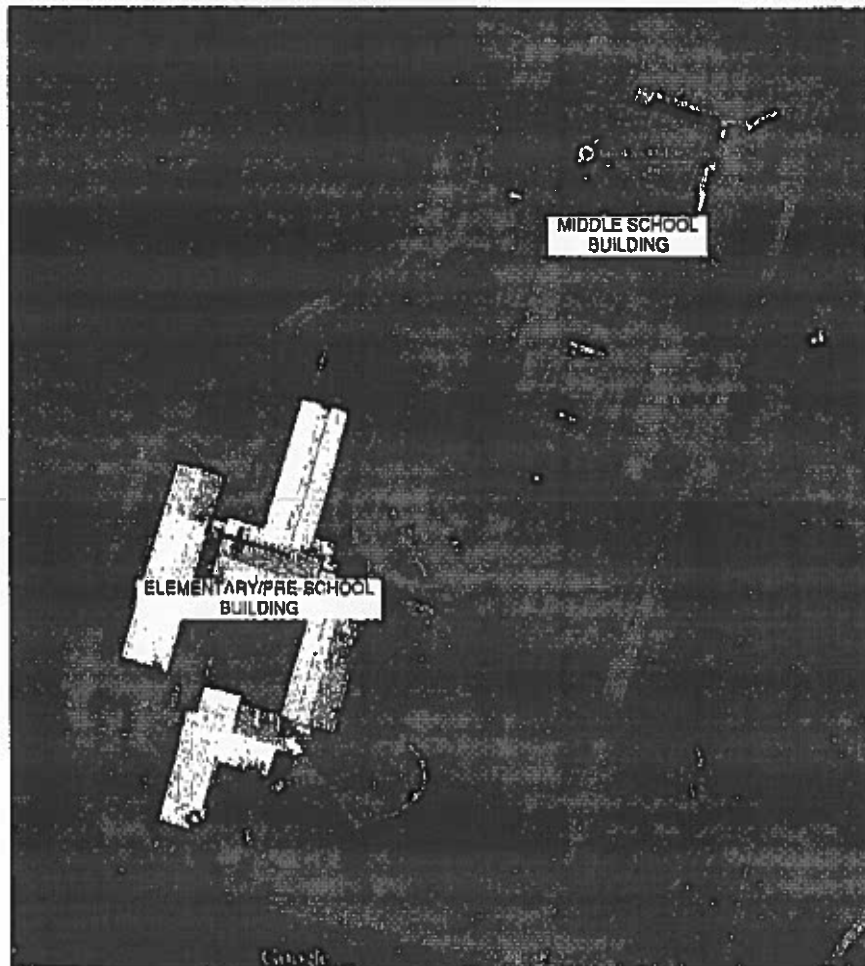


Figure 1: Brooklyn Schools Site Map

This evaluation report presents the existing conditions of the fire alarm systems installed in each of the buildings, outlines any code deficiencies and concerns found and recommends courses of action to mitigate any deficiencies and points of concern regarding the fire alarm systems. This report is based

upon a site survey conducted by Hughes on September 10th 2014. This survey was limited to a visual inspection of the fire alarm systems and did not include functional testing.

2.0 APPLICABLE LAWS, CODES AND STANDARDS

This evaluation has been completed in accordance with the following applicable codes and standards:

- The applicable sections of the Connecticut Fire Safety Code (NFPA 101 – *Life Safety Code*, 2003 edition as amended); and
- NFPA 72 – *National Fire Alarm Code*, 2002 edition.

3.0 MIDDLE SCHOOL BUILDING

The Middle School building's fire alarm system is comprised of two automatic fire alarm systems that are interconnected to each other. A fire alarm system manufactured by Edwards appears to have been installed in the locker rooms and adjacent spaces to the gymnasium. Hughes understands that this area of the building was renovated in 2012 and the Edwards system was installed as part of the renovation work. The remaining majority of the building is provided with a fire alarm system manufactured by Thorn / Autocall. The building is protected by an automatic fire sprinkler system that is supervised by the fire alarm system(s).

During the survey conducted by Hughes, fire alarm speaker and speaker strobe notification appliances were observed to be installed throughout the building. From discussing the fire alarm notification with school personnel, Hughes understands that alarm tones are broadcast over all fire alarm speakers and all fire alarm strobe notification appliances flash throughout the building in the event of an active alarm. It is Hughes's understanding that voice messages are no longer broadcast over fire alarm speakers in the event of an alarm.

It is Hughes's understanding that the Edwards fire alarm system is interconnected with the Thorn / Autocall fire alarm system such that in the event of an active fire alarm on either system, all fire alarm notification appliances (speakers and speaker strobes) simultaneously activate throughout the building.

It should be noted that the fire alarm systems in the Middle School Building are not interconnected with the fire alarm systems within the Elementary/Pre-School Building and there is no annunciation of the Middle School Building fire alarm system at the Elementary/Pre-School Building and vice versa. While this is not mandated by code, notification to school administration may improve building occupant response and evacuation.

3.1 Fire Alarm System Control Equipment

3.1.1 Edwards Fire Alarm System

An Edwards EST3 fire alarm control unit (FACU) is located in the main office of the Middle School. This EST3 fire alarm control unit annunciates fire alarm events on the Edwards system alongside the Thorn / Autocall fire alarm control unit that is also located in the main office. The following Figure 2 illustrates the location of the FACUs in the rear of the main office.

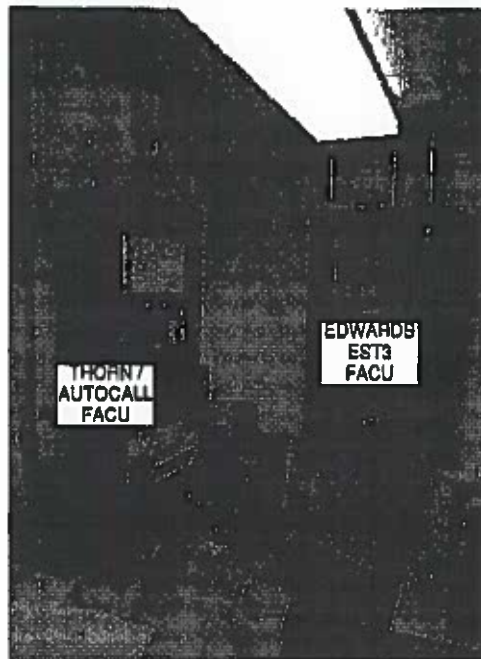


Figure 2: EST3 FACU in Middle School Main Office

Additionally, an Edwards EST3 system annunciator is located in the front vestibule of the main entrance to the Middle School. This annunciator displays events that are detected by the EST3 system. It should be noted that only fire alarm initiating devices connected to the EST3 system are annunciated on the EST3 fire alarm control unit and the vestibule annunciator. All Thorn / Autocall system fire alarm initiating devices are annunciated on the Thorn / Autocall control equipment separately. The following Figure 3 shows the equipment located in the front vestibule of the building.

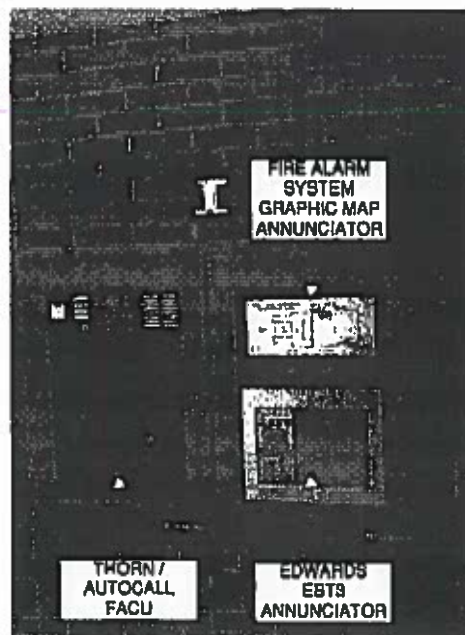


Figure 3: Middle School Front Vestibule Fire Alarm Control Equipment

The Edwards EST3 fire alarm system is a current product manufactured by Edwards. As such, spare parts and support for the EST3 fire alarm system are currently available and will continue to be available for the foreseeable future.

3.1.2 Thorn / Autocall Fire Alarm System

Thorn / Autocall fire alarm control equipment is located in the following locations of the Middle School:

- Main FACU - Main Office
- Graphic Annunciator – Front Vestibule
- Remote Control Unit - Front Vestibule
- 2 Node Panels – Corridor Closet (near main office)

Previous Figures 2 and 3 show the locations of the main Thorn / Autocall FACU, Remote Control Unit and the graphic annunciator. The following Figure 4 shows the location of the 2 fire alarm system node panels located in the corridor closet near the main office.

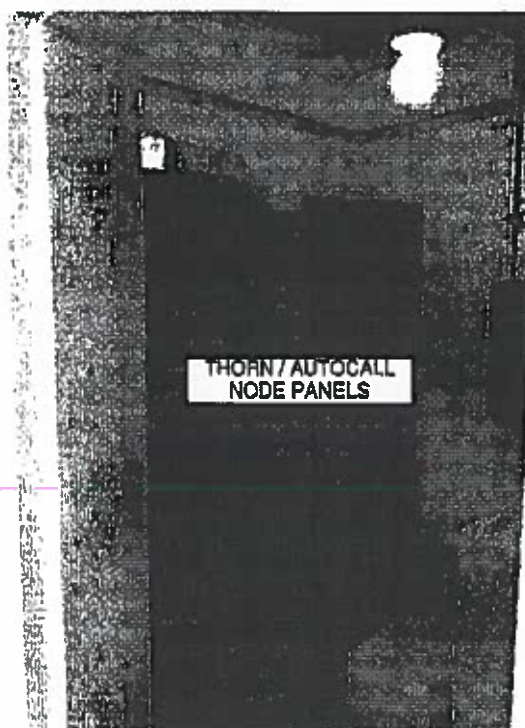


Figure 4: Thorn / Autocall Node Panels

Both the FACU located in the main office and the remote control unit located in the vestibule have microphones for broadcasting voice messages throughout the fire alarm system speakers. However, it is unclear if voice messaging is operational as it is Hughes understanding that in the event of an alarm, only alarm tones are broadcast over the fire alarm speakers and not voice messages.

It should also be noted that the Thorn / Autocall system was showing a trouble condition when Hughes was on-site. From talking with school personnel, it is Hughes's understanding that trouble conditions are commonly observed to be present on the Thorn / Autocall system.

As stated previously, it is Hughes understanding that the existing Thorn / Autocall fire alarm system supervises the status of the EST3 FACU such that in the event of an alarm on either system, all notification appliances throughout the building operate.

Thorn / Autocall was a fire alarm system manufacturing company that started in 1908 as the Autocall Company. From 1908 to 2001, Autocall was purchased and merged with other companies and in 2001, the company was involved in a merge that formed the company SimplexGrinnell. However, at that time, the entire Autocall product line was discontinued. Therefore, spare parts and support for the Thorn / Autocall fire alarm system are no longer available.

3.2 Middle School Fire Alarm System Compliance

The general location of fire alarm initiating devices and notification appliances installed throughout the Middle school building were observed as part of Hughes' survey.

Smoke detection was observed to be installed throughout all common corridors and in electrical rooms, mechanical rooms and storage rooms. Hughes did not observe smoke detection to be installed in the vicinity of all fire alarm system control equipment such as main fire alarm control units and annunciators as required by NFPA 72. This should be corrected in future plans regarding the fire alarm systems. Hughes also observed smoke detection to be provided within the small garage. From discussions with school personnel, this smoke detector has been the source of nuisance alarms, especially when the equipment in the garage is being used. Hughes recommends that this smoke detector be replaced with a heat detector to minimize the nuisance alarms. This should be considered in future plans regarding the fire alarm systems.

The building is fully sprinklered and the sprinkler systems are supervised by the fire alarm systems with valve supervisory switches and waterflow switches as required by NFPA 72 and NFPA 13.

Notification appliances have been provided throughout common corridors, classrooms and public spaces etc. However, Hughes observed some areas of the building to be lacking in fire alarm system notification. These areas include some small common corridors and mechanical rooms. These items of concern should be corrected in future plans regarding the fire alarm systems.

Manual fire alarm boxes have been provided at exits throughout the building. However, Hughes observed that manual a fire alarm box was not installed at the exit door from the loading dock. Hughes observed that some manual fire alarm boxes have been installed at elevations higher than 48 inches which is prohibited per NFPA 72. These items of concern should be corrected in future plans regarding the fire alarm systems.

3.3 Middle School Fire Alarm Systems Summary and Recommendations

Overall, the systems installed throughout the Middle school building provide compliant detection and notification to building occupants except for the items listed in the previous section. However, due to the age of the Thorn / Autocall system and the fact that spare parts and support for this system is no longer available, Hughes recommends a complete replacement of the fire alarm systems throughout the building. Due to the limited area the existing EST3 fire alarm system serves, Hughes recommends that the EST3 fire alarm system also be removed and the areas currently protected by this EST3 system be incorporated into the design of a new all-inclusive building wide fire alarm system.

Hughes emphasizes this recommendation by highlighting the fact the existing fire alarm system was in a "trouble condition" at the time of Hughes' survey. Fire alarm system trouble conditions could

mean that the fire alarm system will not operate as designed in the event of an emergency and should be corrected as soon as possible for the safety of the building occupants.

4.0 ELEMENTARY/PRE-SCHOOL BUILDING

The Elementary/Pre-School building's fire alarm system is comprised of two automatic fire alarm systems that are interconnected to each other. A fire alarm system manufactured by Thorn / Autocall is provided in East portions of the building. The West portion of the building is provided with a fire alarm system manufactured by Simplex. It is Hughes's understanding that the West portion of the building was renovated in 2006 and the Simplex system was installed as part of the renovation work.

The West portion of the building is protected by an automatic fire sprinkler system that is supervised by the Simplex fire alarm system. However, the East portion of the building is not fully sprinklered and only contains domestically connected sprinkler heads in select areas such as janitor's closets and storage rooms. The domestic sprinkler systems in the East portion of the building are supervised by the Thorn / Autocall fire alarm system.

During the survey conducted by Hughes, speaker and speaker strobe notification appliances were observed to be installed throughout the building. From discussing the fire alarm notification with school personnel, Hughes understands that only the strobe notification appliances operate upon alarm and no alert tone or voice message is broadcast through the fire alarm speakers. The lack of audible signaling is a violation of NFPA 72 as the fire alarm system is required to sound an audible signal and specific audibility levels of the signal are required to be maintained throughout all areas of the building.

It is Hughes's understanding that the Simplex fire alarm system is interconnected with the Thorn / Autocall fire alarm system such that in the event of an active fire alarm on either system, all fire alarm notification appliances (speakers and speaker strobes) should activate throughout the building. However, as stated previously, Hughes understands that only the strobe notification appliances operate and no alarm tones or voice messages are broadcast over the fire alarm speakers.

It should be noted that the fire alarm systems in the Elementary/Pre-School Building are not interconnected with the fire alarm systems within the Middle school building and there is no annunciation of the Elementary/Pre-School building fire alarm system at the Middle School Building and vice versa. While this is not mandated by code, notification to school administration may improve building occupant response and evacuation.

4.1 Fire Alarm System Control Equipment

4.1.1 Thorn / Autocall Fire Alarm System

A Thorn / Autocall fire alarm control unit (FACU) and graphic annunciator is located at the main entrance to the Elementary/Pre-School building. This Thorn / Autocall fire alarm control unit annunciates fire alarm events throughout the Elementary/Pre-School Building and allows voice messages to be made over fire alarm speakers. The following Figure 5 illustrates the location of the Thorn / Autocall FACU at the main entrance of the building.

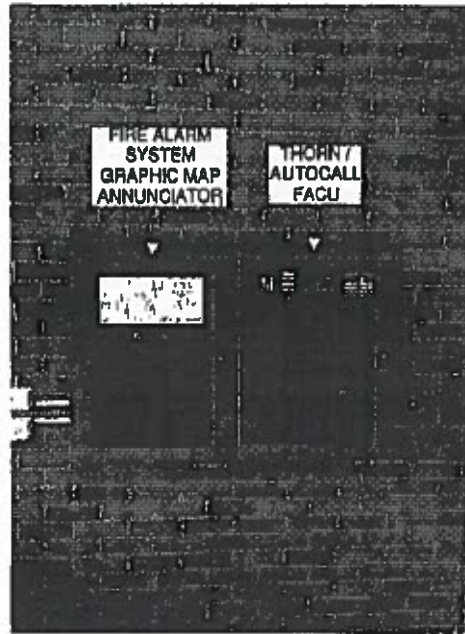


Figure 5: Elementary/Pre-School Main Entrance FACU and Annunciator

A Thorn / Autocall graphic annunciator with remote microphone is also located in the main office of the Elementary/Pre-School building. This Thorn / Autocall graphic annunciator indicated the area of an active fire alarm and allows voice messages to be made over the fire alarm speakers. The following Figure 6 illustrates the location of the Thorn / Autocall FACU in the main office.

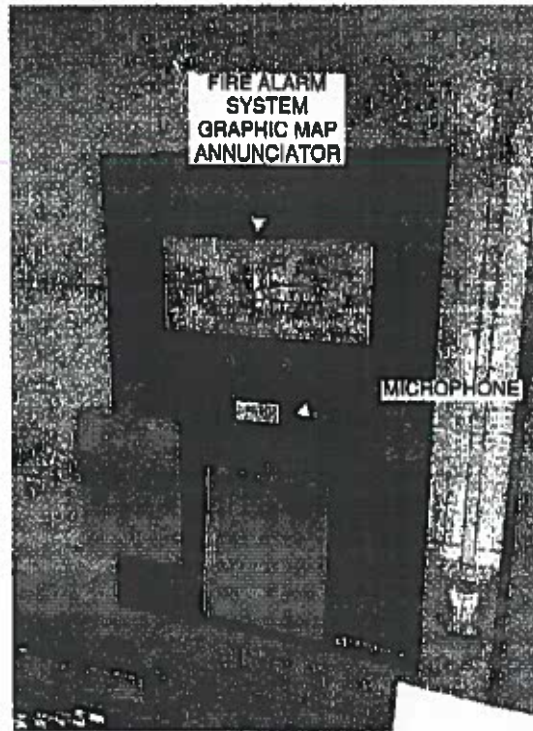


Figure 6: Elementary/Pre School Main Office Annunciator and Microphone

Two Thorn / Autocall fire alarm node panels are located in the storage room across the corridor from the main office. These node panels contain system components that are necessary for the system to operate. The following Figure 7 shows the location of the two Thorn / Autocall fire alarm system node panels.

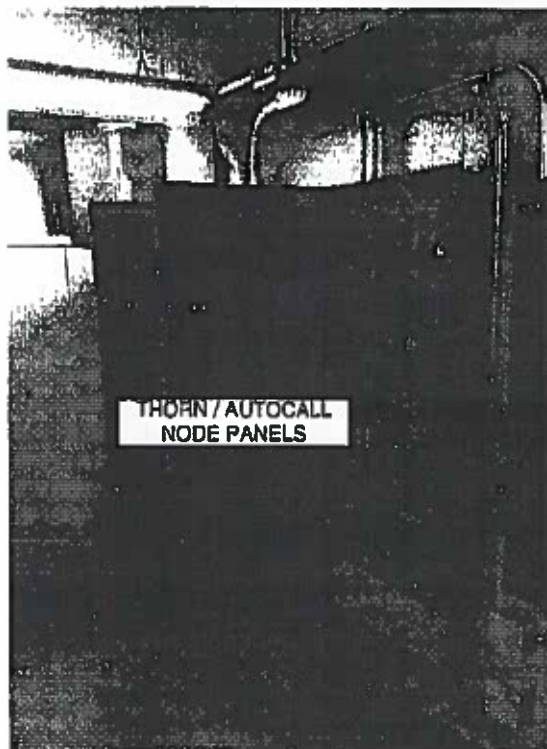


Figure 7: Elementary/Pre-School Node Panels

Microphones are located at both the Annunciator located in the main office and the FACU at the main entrance to the building for broadcasting voice messages throughout the fire alarm system speakers. However, it is unclear if voice messaging is operational as it is Hughes understanding that in the event of an alarm, only strobe notification appliances are activated and no alarm tones or voice messages are broadcast over the fire alarm speakers.

It should also be noted that the Thorn / Autocall system was showing a trouble condition when Hughes was on-site. From talking with school personnel, it is Hughes's understanding that trouble conditions are commonly observed to be present on the Thorn / Autocall system.

As stated previously, it is Hughes understanding that the existing Thorn / Autocall fire alarm system supervises the status of the Simplex FACU such that in the event of an alarm on either system, all notification appliances throughout the building operate.

Thorn / Autocall was a fire alarm system manufacturing company that started in 1908 as the Autocall Company. From 1908 to 2001, Autocall was purchased and merged with other companies and in 2001, the company was involved in a merge that formed the company SimplexGrinnell. However, at that time, the entire Autocall product line was discontinued. Therefore, spare parts and support for the Thorn / Autocall fire alarm system are no longer provided by the manufacturer.

4.1.1 Simplex Fire Alarm System

A Simplex 4100U remote fire alarm control unit (FACU) is located at the entrance to the West portion of the Elementary/Pre-school building. This Simplex 4100U fire alarm control unit annunciates fire alarm events and allows voice messages to be made over the fire alarm speakers. The following Figure 8 shows the location of the Simplex 4100U remote fire alarm control unit at the entrance to the west portion of the building.

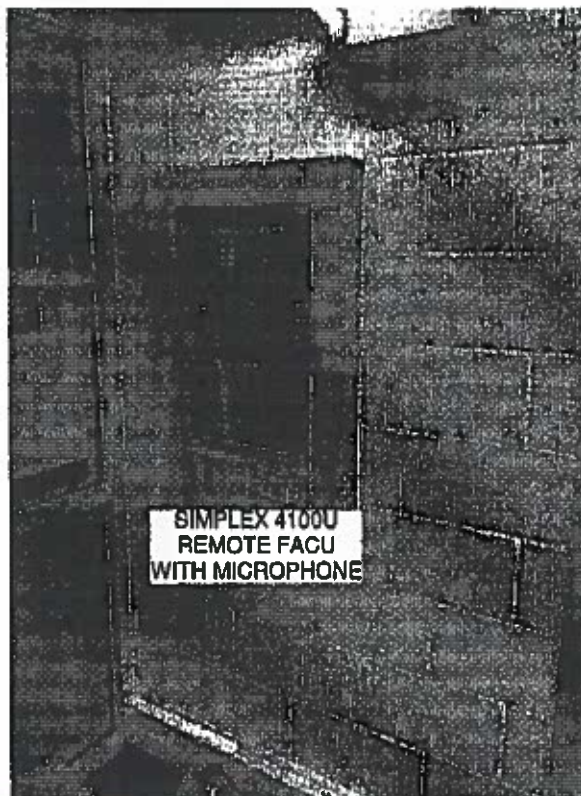


Figure 8: Elementary/Pre-School West Entrance Remote FACU

The main Simplex 4100U FACU is located in a Tel-data/Electrical closet off of the main corridor in the west portion of the building. This Simplex 4100U fire alarm control unit annunciates fire alarm events and allows voice messages to be made over the fire alarm speakers. The following Figure 9 shows the location of the Simplex 4100U FACU in the Tel-data/Electrical closet off of the main corridor in the west portion of the building.

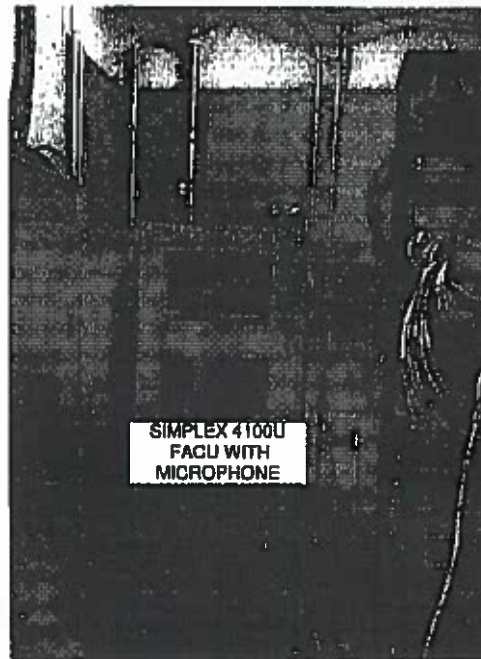


Figure 9: Elementary/Pre-School in Tel-Data/Electric Closet in West Portion of Building

The Simplex 4100U fire alarm system has been discontinued by Simplex. However, spare parts and support for this system is currently available and will continue to be available for the foreseeable future.

Microphones are located at both the main FACU in the tel-data/electrical closet and the remote FACU at the west entrance. However, it is unclear if voice messaging is operational as it is Hughes's understanding that in the event of an alarm, only strobe notification appliances are activated and no alarm tones or voice messages are broadcast over the fire alarm speakers.

As stated previously, it is Hughes understanding that the existing Thorn / Autocall fire alarm system supervises the status of the Simplex FACU such that in the event of an alarm on either system, all notification appliances throughout the building operate.

4.2 Elementary/Pre-School Building Fire Alarm System Compliance

The general location of fire alarm initiating devices and notification appliances installed throughout the Elementary/Pre-School building were observed as part of Hughes' survey.

Smoke detection was observed to be installed throughout all common corridors and in electrical rooms, mechanical rooms and storage rooms. Hughes observed some classrooms to have smoke detection while other classrooms to have no fire alarm system detection installed. Hughes did not observe smoke detection to be installed in the vicinity of all fire alarm system control equipment such as fire alarm control units and annunciators as required by NFPA 72. This should be corrected in future plans regarding the fire alarm systems.

The building is partially sprinklered as previously described. All sprinkler systems are supervised by the fire alarm systems with valve supervisory switches and waterflow switches as required by NFPA 72 and NFPA 13.

Notification appliances have been provided throughout common corridors, classrooms, public spaces. However, Hughes observed some areas of the building to be lacking fire alarm system

notification. These areas include the advising area just inside the main entrance. These areas of concern should be corrected in future plans regarding the fire alarm systems.

Manual fire alarm boxes were observed to be provided at exits throughout the building.

4.3 Elementary/Pre-School Building Fire Alarm Systems Summary and Recommendations

Overall, the systems installed throughout the Elementary/Pre-School building provide compliant detection and notification layouts except for the items listed in the previous section. However, the failure of the system to produce an audible signal over the fire alarm speakers in the event of an alarm violates the notification requirements of NFPA 72. Due to the age of the Thorn / Autocall system, the current status of audible alarm signals and the fact that spare parts and support for this system is no longer available, Hughes recommends a complete replacement of this system.

Hughes proposes two options regarding the existing Simplex 4100U fire alarm system. The first option is to completely remove this system and incorporate the area currently protected by it into the design of a new all-inclusive building wide fire alarm system. The second option is to leave the existing 4100U fire alarm system installed and interconnect this system to a new fire alarm system in the remaining portion of the building. However, Hughes recommends that this option #2 only be considered if the new fire alarm system equipment is going to be manufactured by Simplex. If a new Simplex fire alarm system is installed, it will be able to be networked to the existing 4100U fire alarm system and will allow for a compatible interface of controls and signals. This arrangement would create a single Simplex fire alarm system network serving the entire building. However, it is important to note that there are many other fire alarm system manufacturer's that have competitive fire alarm equipment and Simplex is not the only option.

As a point of emphasis, the existing Thorn / Autocall fire alarm system was in a "trouble condition" at the time of Hughes' survey. Fire alarm system trouble conditions could mean that the fire alarm system will not operate as designed in the event of an emergency and should be corrected as soon as possible for the safety of the building occupants.

5.0 OVERALL RECOMMENDATIONS AND ESTIMATED COSTS

As recommended previously, the Thorn / Autocall fire alarm systems in both the Middle School Building and the Elementary/Pre-School building should be completely replaced due to the facts that they have exceeded their equipment lifecycles, trouble conditions are common on these systems, the lack of audible signaling in the Elementary/Pre-School building and the fact that spare parts and support are no longer readily available. Additionally, Hughes recommends that the existing EST3 fire alarm system within the limited area of Middle School Building also be removed as this area is small in size and it would be more beneficial to have a new fire alarm system of a single manufacturer installed throughout the building. Similarly, Hughes recommends that the existing 4100U fire alarm system within the Elementary/Pre-School building either be replaced or be networked to a new Simplex fire alarm system in the remainder of the building. As stated previously, this is only Hughes' recommendation if Brooklyn Schools choose Simplex as the fire alarm system manufacturer moving forward.

During the site survey, Hughes did not observe any means of supervision or interconnection between the Middle School and Elementary/Pre-School buildings. From discussions with school personnel, annunciation of each buildings' fire alarm system is desired at the main office of the Middle School to alert school personnel of the status of both buildings. To accomplish this, Hughes recommends that as part of the new fire alarm systems designs, annunciation of each buildings' fire alarm systems be provided within both buildings. This will allow school personnel in the Middle School to supervise the status of the Elementary/Pre-School fire alarm system and will allow school personnel in the Elementary/Pre-School to supervise the status of the Middle School building fire alarm system.

Brooklyn Schools
Fire Alarm Systems Evaluation

September 19, 2014
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It should be noted that in order to provide the most supervision between buildings and establish consistency across the campus, Hughes recommends installing the same manufacturer's fire alarm equipment in both the Middle School and Elementary/Pre-School buildings. This will ensure the control equipment is compatible between buildings and will also improve the ease of service and maintenance as only one manufacturer's equipment will be present throughout the campus.

Although not specifically required, Hughes recommends that the new fire alarm systems be designed for voice evacuation. By installing a voice evacuation fire alarm system, voice messages may be broadcast throughout the fire alarm system speakers similar to what the existing fire alarm systems in the buildings were originally capable of. Voice evacuation allows for the buildings to be more easily managed in the event of an emergency and provides specific instructions to building occupants in lieu of a general alarm tone.

6.0 COST ESTIMATES

Hughes presents the following estimated construction costs for installing new fire alarm systems in both the Middle School and Elementary/Pre-School Buildings. The costs below do not include engineering design services.

Middle School Fire Alarm System Replacement:	~\$100,000.00 – \$120,000.00
Elementary/Pre-School Fire Alarm System Replacement:	~\$120,000.00 – \$140,000.00
Total Estimated Construction Costs:	~\$220,000.00 – \$260,000.00

It should be clarified that the estimated cost for the Elementary/Pre-School represents a completely new fire alarm system. As included in the previous recommendations, if the existing Simplex 4100U fire alarm control unit in the west portion of the building is reused, this estimate may be slightly lower.

7.0 SUMMARY

Hughes understands that a previous evaluation has been conducted by a JP Engineering Inc. of Windsor Connecticut. Hughes has reviewed their document and it appears as though it is a specification for a completely new fire alarm system. However, the document is only applicable to the Middle School building and does not appear to provide adequate information for a code compliant fire alarm system design.

Hughes strongly recommends that any new fire alarm system work be designed and specified by a Fire Protection Engineer. Detailed design drawings and project specifications should be developed and finalized with Brooklyn Schools to ensure all concerns are addressed and all desired functionality is included in the design. Additionally, preparation of engineered design drawings would improve the competitive bidding landscape for the installation work. This should all be completed prior to soliciting bids and selecting a contractor to complete the work.

Hughes Associates Inc. Appreciates the opportunity to assist the Brooklyn Schools. Please do not hesitate to contact us should there be any questions, concerns or comments on this fire alarm system evaluation report.

Respectfully Submitted,



Eric M. Camiel, EIT, CET
Fire Protection Consultant

Reviewed By,

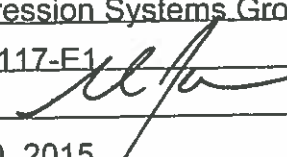


Mark J. Blackburn, PE, CFPS
Director, Rhode Island Office

BID FORM

This BID FORM shall be submitted with your bid signed by an authorized member or agent of your company. Please complete the following information as part of the bid submittal:

GENERAL:

Bid Submitted By: Fire Suppression Systems Group
Connecticut License #: ELC.0199117-E1
Authorized Signature: 
Date: January 30, 2015
Telephone Number: 401-723-7301
Email: ddailey@firesuppression.com

ADDENDA (IF APPLICABLE):

The Bidder acknowledges receipt of the following Addenda to the plans and/or specifications:

Addendum Number #1 Date 1/28/15

COSTS:

1. Middle School:	<u>One Hundred Eighty Five Thousand Seven Hundred and 00/100</u> (Price in Words)	Dollars \$ <u>185,700.00</u> (Price in Figures)
2. Elementary/Pre-School:	<u>Two Hundred One Thousand Five Hundred Sixty and 00/100</u> (Price in Words)	Dollars \$ <u>201,560.00</u> (Price in Figures)
3. Total Project Cost:	<u>Three Hundred Eight Seven Thousand Two Hundred Sixty and 00/100</u> (Price in Words)	Dollars \$ <u>387,260.00</u> (Price in Figures)

The sum of lines 1 and 2 must equal Line 3.

EQUIPMENT:

Fire Alarm Control Equipment Manufacturer:
FCI-E3
Graphic Network Annunciator Model #:
FPT-WKS

SUB-CONTRACTORS (IF APPLICABLE):

Subcontractor #1: N/A
Purpose: _____
Subcontractor #2: _____
Purpose: _____

ADDENDUM #1



TO: All Bidders

FROM: Mark J. Blackburn, PE, CFPS

DATE: January 28, 2015

SUBJECT: Brooklyn Schools
Fire Alarm Systems Replacement Project

CC: Dr. Louise Berry - Brooklyn Schools Superintendent
Eric Camiel, CET - JENSEN HUGHES

This document represents Addendum #1 for the Fire Alarm System Replacement Project at the Brooklyn Schools located in Brooklyn, CT. This addendum shall become part of the Contract Documents and represent clarifications based on the Mandatory Pre-bid Meeting on January 23, 2015.

- All bids must be received in the office of the Superintendent of Schools, The Brooklyn School, 119 Gorman Road, Brooklyn, CT 06234 on or before **January 30, 2015 at 3:00PM**. Bids shall be in a sealed envelope plainly marked **"SEALED BID FOR BROOKLYN SCHOOLS FIRE ALARM SYSTEM REPLACEMENT PROJECT"**. Bids will be opened publically immediately following the bid submission deadline.
- All bids must be submitted on the attached Bid Form.
- A copy of the Mandatory Pre-Bid sign-in sheet has been attached to this addendum.
- All bids must be accompanied by a Bid Bond. Performance and Payment Bonds must be provided by the awarded vendor at time of Contract Award.
- All labor for the project shall utilize current Prevailing Wage rates in accordance with State of Connecticut requirements.
- All bids shall be a lump sum basis. Separate lump sum costs shall be submitted for each building.
- The basis of this bid shall be the Drawings and Technical Specifications prepared by JENSEN HUGHES dated November 14, 2014 and Addendum #1 dated January 28, 2015.
- Hard copies of the documents stamped by a registered Fire Protection Engineer will be distributed to the awarded vendor for submission to the Brooklyn Fire Department for approval and permit.
- The Owner & Engineer will hold a scope review meeting with the successful bidder at the project location listed above on a date to be determined by the Owner (Brooklyn Schools).
- No bidder may withdraw his/her bid for sixty (60) calendar days after the bid opening.
- Brooklyn Schools reserves the right to reject any and all bids as they see fit.

C: 414-736-8892
F: 414-736-8329

17 Meridiana Central Blvd., Suite 1002
New York, NY 10086-3541

jensenhughes.com

- Bidders are required to review and base their bid on the Drawings and Technical Specifications as well as a field visit to the site (pre-bid walkthrough) to inspect existing conditions and identify any issues that will affect the performance of the work prior to bidding.
- Any irregularities or existing conditions that will affect the performance of this project should be brought to the attention of the Owner and Engineer prior to bid submittal.
- Contractor shall supply insurance certificates at time of project award.
- All bids submitted shall constitute a proposal to perform work and complete the scope of work listed in accordance with the Drawings and Technical Specifications as well all local, state and federal codes.
- Contractor shall include the cost of all applicable permits and plan review fees in his/her bid.
- Contractor shall provide model numbers of the proposed fire alarm network annunciators.
- All work shall be completed on second shift.
- All fire alarm equipment and materials shall be new.
- The work includes the removal of all existing fire alarm equipment, including wiring and conduit, throughout both buildings upon the acceptance of the new systems.
- All work including final acceptance of the systems and demolition of the existing systems shall be completed within 120 calendar days of Contract Award.
- Throughout the project, the contractor shall submit applications for payment for approval by JENSEN HUGHES on standard AIA forms.

February 4, 2015

The Brooklyn Board of Education held its regular monthly meeting on February 4, 2015 in the middle school library. In attendance were: Mrs. Lyons, Attorney Kelley, Mr. Rossi, Mrs. Majek, and Mr. Otto, Board of Finance. Also present Dr. Berry, Superintendent, and Mrs. King, Elementary School Principal. Members of the teaching staff and public were in the audience.

Mrs. Johnson arrived at 7:20

Mr. Voccio, Board of Selectman, arrived at 7:20

Absent: Mr. DonFrancisco

1. Call to Order

Mrs. Lyons called the meeting to order at 7:11 pm.

2. Comments by:

- a. BEA – none
- b. Local 1303 - AFSCME – none
- c. PTO – none
- d. Public – Mrs. Arrends asked about student safety when a group of students were recently locked in a classroom when a lock on the classroom door failed. Mr. Tusia, Director of Property Services, explained that the mechanism in the door lock failed and the door had to be removed. The students were not in danger and a ladder was placed at the window as an emergency exit if the need arose. All students were safe in the classroom for approximately 15 minutes while the door was being removed.

Mrs. Arrends also asked why there was no school on Tuesday, February 3, 2014. Dr. Berry informed her that school was closed because there were many roads in Brooklyn that were too narrow for the buses to pass on, and town crews needed more time to clean up the road for safety purposes.

Mrs. Arrends also asked the Board of Education to consider purchasing a software program, which would allow teachers to post student grades for individual assignments. Dr. Berry informed her that some schools, which are considered alliance districts, have such software. Brooklyn school is not considered an alliance district (a low performing district).

She also asked where the school falls on the on the priority list for plowing and snow removal. Dr. Berry informed her that her concern

should be directed to the Board of Selectman. Mrs. Arrends also asked about if some of the snow days will be made up within the school year rather than make them all up in June. Dr. Berry stated that make-up days are an issue that will be addressed by the Board of Education members.

Finally, Mrs. Arrends asked for climate survey reports from the elementary school. She stated that she asked for them at a prior Board of Education meeting and has not received them yet.

Mrs. Lyons asked Mrs. Arrends to put her concerns and requests in a letter that can be examined by the Board of Education members more closely.

Mrs. Johnson congratulated Dr. Berry on being asked to speak at the Oxford Education Research Symposium at Oxford University, Oxford, England in March, 2015.

3. Minutes of

- Board Meeting held on December 10, 2014

Motion to accept the minutes of the December 10, 2014 Board of Education meeting
(Johnson / Kelley)
Unanimous vote to accept

4. Correspondence:

- John Cole Resignation

Motion to accept Mr. Cole's letter of resignation with regret
(Kelley / Rossi)
Unanimous vote to accept

5. Consent Agenda

- None

6. Administrative Reports:

- a. Elementary School Principal Presentation on Curriculum

Mrs. King presented a report on curriculum development and how it aligns with the Common Core State Standards. She stated that

they are currently working on English Language Arts. She handed out an example of all the components of curriculum development. She informed the Board of Education that the availability of a consultant to work with members of the elementary staff at professional development meetings has been a huge help. At this time, teachers are implementing portions of the Common Core State Standards into their daily instruction. Mrs. King stated that the ELA district goal is to be finished with this curriculum by the end of the school year.

b. Middle School Principal
Report on Curriculum and Professional Development

Report was enclosed in the Board of Education members' packets for their review.

c. Assistant Principal
Winter Sports

Report was enclosed in the Board of Education members' packets for their review.

d. Special Education Director
Special Education Enrollment Report

Report was enclosed in the Board of Education members' packets for their review.

e. Superintendent

- High School Choice Report

The high school choice breakdown report was included in the Board of Education members' packets.

Dr. Berry stated that she has not received a final figure from Woodstock Academy or Killingly High School concerning their tuition costs for the 2015-2016 school year. She suspects there will be a significant increase in costs.

- 2015-2016 Budget Preparation

The development of the 2015-2016 budget will begin this month and the members of the Board of Education need to schedule additional meetings during February and March to develop a budget.

- **Payment of Bills**

Dr. Berry will present the bills at the next Board of Education meeting.

- **Enrollment Report**

Report was enclosed in the Board of Education members' packets for their review.

- **Union Contract**

Some of Board of Education members have not had the opportunity to review the contract. They will review the contract and vote on it at the next budget meeting.

- **State Report on Small School Districts**

The report was in the packets for review. Mr. Otto commented on the Connecticut State Department of Education Report on the Study of Small School Districts. He stated that future consolidation of surrounding small school districts is something that should be considered.

- **Capital Projects**

- Rose Wing Roof
- School Security – Key Card Access
- Data Cabling
- Telephone System
- Classroom Security – locks on inside of classroom doors

Motion to authorize the submission of the four proposals to be submitted to the Capital Committee for the next step (Kelley / Johnson)
Unanimous vote to accept

- **Fire Alarm Update**

Dr. Berry informed the Board of Education members that they have received two bids for the fire alarm system update. One was in the amount of \$562,900.00 and the other was in the amount of \$387,260.00. Hughes & Associates, a very reputable company, has recommended the second bid of \$387,260.00 from the Fire Suppression System Group.

Motion to present the \$387,260.00 proposal from the Fire Suppression System Group to the Capital Committee for review
(Johnson / Kelley)
Unanimous vote to accept

7. Public Comments

Mrs. Andrews expressed concerns about traffic patterns during morning drop off and afternoon pick up.

The Board of Education is aware of the problem, and the need for a comprehensive plan to rectify the current traffic problems.

She also stated that the sidewalks at the elementary school are slippery and she would like to see more attention to them.

8. Committee Reports

a. Budget

Will be discussed at the next meeting.

b. Policy

Attorney Kelley is currently reviewing changes to the Connecticut State Statutes to see how they affect Brooklyn's policy.

c. Curriculum

Nothing to discuss at this time.

d. Negotiations – Local 1303 Contract

See section 6e.

e. Capital

See section 6e.

f. EastConn

Nothing to discuss at this time. The meeting was canceled.

g. High School Relations – Woodstock Academy

At a previous meeting, Attorney Kelley mentioned that a Brooklyn student received the Headmaster's Award, but he did not have her name at the time. Michaela Green is the student who received the award.

h. High School Relations – Killingly High School

Nothing to report at this time.

i. Recreation Committee

The minutes are available for review on the town website.

j. Board of Selectman Liaison

Mrs. Lyons did not attend the meeting.

k. Board of Finance Liaison

Mr. Otto stated that there would be a new report coming out. He also stated that the Finance Director would speak to Dr. Berry about special education funding.

Mr. Voccio stated that there is a budget workshop meeting on Saturday at 9:00.

The next Board of Selectman meeting will be next Thursday.

There is a new accounting system to bring the town and school budgets together.

Representatives from the:

PTO – none

BEA – none

BOF – none

9. Old Business

None

10. New Business

None

11. Other
None

12. Public Comments

None

13. Adjournment

Motion to adjourn at 8:44 pm
(Johnson / Kelley)
Unanimous vote to accept

Respectfully Submitted
Joann M. Engel
Recording Secretary



117 METRO CENTER BLVD | SUITE 1002
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SENT VIA FACSIMILE: (860) 774-6938
6 Pages in Total

September 2, 2014

Louise Berry
Superintendent
Brooklyn Schools
119 Gorman Road
Brooklyn, CT 06234

RE: Proposal for Fire Protection Engineering Services – Fire Alarm System Evaluation
Brooklyn Schools, Brooklyn, CT

Dear Ms. Berry:

As discussed, Hughes Associates (Hughes) is submitting a proposal to Brooklyn Schools (Client) to provide fire protection engineering and code consulting services for the Middle School and Gymnasium Building and the Elementary School and Preschool Building. The scope of this proposal includes evaluating the existing fire alarm systems installed in each building for compliance with applicable codes and standards and general best practices. It is Hughes' understanding that there are a total of four (4) existing fire alarms that do not appear to be interconnected and spare parts for the existing systems are not readily available.

The consulting services will be performed in accordance with the following applicable codes and standards:

- The applicable sections of the Connecticut Fire Safety Code (NFPA 101, *Life Safety Code*, 2003 edition); and
- NFPA 72, *National Fire Alarm Code*, 2002 edition.

Hughes agrees to provide the services set forth in this contract below.

1. Hughes will conduct one (1) on-site survey of each building. During the on-site survey, Hughes will document the existing fire alarm control equipment within each building or portion thereof, document existing fire alarm device types and general locations, and review the current interface between each of the buildings fire alarm systems. Hughes will not conduct functional testing.
2. Hughes will prepare a fire alarm system evaluation report. The report will provide the following:
 - a. General overview of the existing conditions pertaining to the buildings' fire alarm systems;
 - b. Outline any code related deficiencies observed as a result of the site survey;

- c. Review general equipment lifecycle information based on the existing fire alarm control equipment and field device types;
- d. Provide recommendations for improvements to the buildings' fire alarm systems; and
- e. Provide rough order of magnitude cost estimates to implement the recommendations.

3. Hughes will attend a meeting with the Client to review the report discuss recommendations.

The services described above will be provided for a firm fixed fee of \$5,900.00.

Services in addition to those specified in this proposal can be provided at a mutually agreeable fee under a separate proposal. Additional services may include meetings with the Fire Department, engineering design services and construction administration services.

Hughes is prepared to proceed with the above services immediately following receipt of written authorization. Mark J. Blackburn, P.E. will serve as project manager and point of contact. Hughes reserves the right to change personnel on an "as-available" basis.

Expenses are reimbursable at cost plus fifteen percent and are not included in the fixed fee above. Expenses include local travel mileage, postage, copying, photograph development, express shipping and other miscellaneous costs related to the project.

The following exhibits are attached to and made a part of this agreement:

1. Exhibit A - Attached General Terms and Conditions.

EXECUTION OF THIS PROPOSAL INDICATES THE CLIENT HAS READ AND FULLY UNDERSTANDS ALL THE TERMS AND CONDITIONS CONTAINED HEREIN AND CONFIRMS ACCEPTANCE OF SAME.

To indicate acceptance and to authorize initiation of services, return a countersigned copy of this agreement to Hughes Associates, Inc., 117 Metro Center Boulevard, Suite 1002, Warwick, Rhode Island 02886.

Hughes Associates appreciates the opportunity to assist Brooklyn Schools. If you have any questions please contact me at 401-736-8992 or mblackburn@haifire.com.

Sincerely,

Hughes Associates



Mark J. Blackburn, P.E., CFPS
Director, Rhode Island Office

Accepted by Brooklyn Schools:

Signature: Louise S. Berry
Name: Louise S. Berry
Title: Superintendent
Date: 9/3/14



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SENT VIA FACSIMILE: (860) 774-6938
6 Pages in Total

September 23, 2014

Louise Berry
Superintendent
Brooklyn Schools
119 Gorman Road
Brooklyn, CT 06234

Martha
sheet = fire co
revised

RE: Proposal for Fire Protection Engineering Services:
Fire Alarm System Design & Construction Administration Services
Brooklyn Schools, Brooklyn, CT

Dear Ms. Berry:

As discussed, Hughes Associates (Hughes) is submitting a proposal to Brooklyn Schools (Client) to provide fire protection engineering and code consulting services for the Middle School and the Elementary School/Preschool buildings. The scope of this proposal includes the design of new addressable voice evacuation fire alarm systems for the Middle School and Elementary/Pre-School buildings. The scope of work includes construction administration services that include coordinating a bid walkthrough and aiding Brooklyn Schools through the bidding process as well as providing construction oversight of the fire alarm system installations. The scope of work includes the development of AutoCAD drawings for both buildings.

The proposed services will be performed in accordance with the following applicable codes and standards:

- The applicable sections of the Connecticut Fire Safety Code (NFPA 101, *Life Safety Code*, 2003 edition); and
- NFPA 72, *National Fire Alarm Code*, 2002 edition.

Hughes agrees to provide the services set forth in this contract below.

Development of AutoCAD Drawings:

1. Hughes will retain the services of a computer aided drafting (CAD) firm to create accurate AutoCAD floor plans from PDF drawings of each of the buildings. Hughes will use these AutoCAD drawings in the design of the new fire alarm systems for each building.

Fire Alarm System Design Phase:

1. Hughes will conduct existing conditions surveys of each building for the purposes of developing the fire alarm system design documents.

2. Hughes will prepare a complete set of construction drawings of the new fire alarm systems for each building. Fire alarm system design drawings will show the location of fire alarm system control equipment, placement and type of all fire alarm system initiating devices and notification appliances, conceptual riser diagrams and installation details. Drawings will be stamped and signed by the Professional Engineer (P.E.) assigned to this project, specializing in fire protection engineering, registered in the state of Connecticut.
3. Hughes will prepare a set of fire alarm technical specifications based on the applicable codes of the state of Connecticut.
4. Hughes will attend one (1) meeting with Brooklyn Schools to review the construction documents and attend one (1) meeting with the Brooklyn Fire Department to review the construction documents.

Construction Administration Phase – Bidding:

1. Hughes will attend a project walkthrough with fire alarm installing contractor bidders and provide assistance to Brooklyn Schools regarding questions from bidders.
2. Hughes will provide assistance with the review of fire alarm bids from installing contractors.

Construction Administration Phase – Construction Oversight:

1. Hughes will conduct four (4) site visits during active construction to ensure compliance of the installation with the construction documents and the applicable codes and standards.
2. Hughes will review sub-contractor submittal packages including shop drawings and equipment specification sheets.
3. Hughes will provide written responses for Requests for Information (RFI).
4. Hughes will witness a 100% pre-acceptance tests to be conducted by the installing contractor for each building.
5. Hughes will witness two (2) fire alarm final acceptance tests with the Brooklyn Fire Department. One (1) final acceptance test is anticipated for each building.
6. Hughes will review as-built drawings and Operations and Maintenance (O&M) manual developed by the contractor.

The services described above will be provided in accordance with the following fee breakdown:

Development of AutoCAD drawings:	\$3,000.00
Design Phase:	\$13,000.00
CA – Bidding:	\$3,500.00
CA – Construction Oversight:	\$12,500.00
TOTAL:	\$32,000.00

Additional expenses will be reimbursable at cost plus fifteen percent (15%) and are not included in the fixed fees above. Expenses include local travel mileage, postage, copying, printing/plotting, express shipping and other miscellaneous costs. Expenses are estimated to not exceed \$1,000.00.

Services in addition to those specified in this proposal can be provided at a mutually agreeable fee under a separate proposal. Additional services may include additional meetings, additional evaluations of the life safety systems within the buildings etc.

Brooklyn Schools - Fire Alarm Design & CA

Proposal

Eric M. Camiel, EIT, CET will serve as the point of contact and the project manager for this project. Mark J. Blackburn PE, CFPS will serve as the Engineer of Record and provide QA/QC for the project. Hughes is prepared to begin work immediately following receipt of written authorization and the necessary documents.

The following exhibits are attached to and made a part of this agreement:

- 1. Exhibit A - Attached General Terms and Conditions.

EXECUTION OF THIS PROPOSAL INDICATES THE CLIENT HAS READ AND FULLY UNDERSTANDS ALL THE TERMS' AND CONDITIONS CONTAINED HEREIN AND CONFIRMS ACCEPTANCE OF SAME.

To indicate acceptance and to authorize initiation of services, return a countersigned copy of this agreement to Hughes Associates, Inc., 117 Metro Center Boulevard, Suite 1002, Warwick, Rhode Island 02886.

Hughes Associates appreciates the opportunity to assist Brooklyn Schools. If you have any questions please contact me at 401-736-8992 or ecamiel@haifire.com.

Sincerely,

Hughes Associates

Eric M. Camiel, EIT, CET
Fire Protection Consultant

Mark J. Blackburn, PE, CFPS
Director, Rhode Island Office

Accepted by Brooklyn Schools:

Signature: Louise S. Berry
 Name: Louise S. Berry
 Title: Superintendent
 Date: 01/26/14

EXHIBIT A

General Terms & Conditions For the HAI Proposal and Agreement for Services for:

CLIENT: Brooklyn School Department, Brooklyn, CT
for
Project: Fire Alarm System Evaluation

Reference Conditions: Hughes Associates, Inc. will hereinafter be referenced as HAI and the above referenced CLIENT will be referred to as CLIENT. The Project may be hereinafter referenced either as the "Project" or by abbreviation as above set forth.

Entire Agreement: These General Terms and Conditions, along with the Agreement for Services to which these General Terms and Conditions are attached (the "Agreement for Services") and the Proposal attached to the Agreement for Services (the "Proposal") (collectively with the Agreement for Services and the Proposal, this "Agreement"), constitutes the entire agreement between CLIENT and HAI, regarding the Project. If HAI has commenced work in connection with the Project, all provisions in this Agreement for the benefit or protection of either party shall apply to such activities. There are no prior or contemporaneous, oral or written, representations, understandings or agreements which are not fully expressed in this Agreement. No amendment or change order shall be valid unless it is in writing and signed by an authorized representative of the party against whom such amendment or change order is sought to be enforced.

Relationship of Parties. HAI, in furnishing services to CLIENT, is an independent contractor. HAI does not undertake to perform any regulatory or contractual obligation of CLIENT or to assume any responsibility for the CLIENT's business or operations.

Subcontracting: HAI shall supervise, perform or cause to be performed all work to be accomplished by HAI and may call upon the expertise of subcontractors in the performance of the services hereunder.

Severability: The provision of this Agreement shall be severable, and if any clause, sentence, paragraph, provision, or other part hereof shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder hereof, which remainder shall continue in full force and effect.

Billings/Payments: Invoices for services shall be submitted monthly. Payment is due within 30 days of receipt. If payment is not received 30 days of receipt, such fees shall be subject to a service fee of 1.5% per month, and HAI reserves the right to pursue all appropriate remedies, including, without limitation, suspending all performance under this Agreement. In the event that services are suspended for nonpayment, HAI shall have no liability for any delay or other damage, contractual or otherwise, caused by or arising out of the suspension of services of nonpayment. Acceptance by HAI of any payment more than 30 days overdue shall not serve as a waiver of HAI's contractual right to suspend service for nonpayment. In the event of nonpayment of fees, CLIENT will be responsible for all costs, including, without limitation, court costs, collection costs, reasonable attorneys' fees, expert fees, and all other costs allowed by law, which may be incurred by HAI in pursuit of payment.

Taxes. There shall be added to the charges under this Agreement, and CLIENT shall pay to HAI, an amount equal to any taxes, levies and duties, however designated or levied, based upon such charges, this Agreement, the services or materials provided, or their use, including, without limitation, state and local sales and use taxes, which are paid by or are payable by HAI, plus interest and penalties, if any, exclusive, however, of United States federal, state or local taxes based on the net income of HAI. Notwithstanding the preceding sentences, HAI accepts full and exclusive liability for the payment of all employer contributions and taxes measured by the remuneration paid to HAI employees as required by all applicable United States federal, state and local laws, rules and regulations.

Waiver: No waiver by either party of any breach, default, or violation of any term, warranty, representation, agreement, covenant, condition, or provision hereof shall constitute a waiver of any subsequent breach, default, or violation of the same or any other term, warranty, representation, agreement, covenant, condition, or provision hereof. All waivers must be in writing and signed by the party against whom enforcement of the waiver is sought. All remedies are cumulative, and the election to pursue less than all remedies shall not be a waiver of the right to pursue any other remedy.

Force Majeure: Obligations of either party under this Agreement shall be suspended, and such party shall not be liable for damages or other remedies while such party is prevented from complying herewith, in whole or in part, due to contingencies beyond its reasonable control, including, but not limited to, strikes, riots, war, fire, acts of God, injunction, compliance with any law, regulation, or order, whether valid or invalid, of the United States of America or any other governmental body or any instrumentality thereof, whether now existing or hereafter created, inability to secure materials or obtain necessary permits, provided, however, the party so prevented from complying with its obligations hereunder shall promptly notify the other party thereof.

Compliance with Law: In the performance of all services to be provided hereunder, HAI agrees to comply with all applicable federal, state, and local laws and ordinances and all lawful order, rules, and regulations of any constituted authority.

Applicable Law; Jurisdiction; Venue: The validity, performance, and construction of this Agreement shall be governed by and construed according to the laws of the State of Maryland exclusive of its conflicts of law provisions. All claims hereunder shall be tried solely and exclusively in the Courts of Baltimore County, Maryland or the United States District Court for the District of Maryland, Northern Division. Each party consents to the jurisdiction and venue of
HUGHES ASSOCIATES, INC.

such court. EACH OF THE PARTIES HEREBY KNOWINGLY AND VOLUNTARILY WAIVES ANY AND ALL RIGHTS TO A JURY TRIAL IN ANY PROCEEDING INVOLVING ANY DISPUTE OR MATTER ARISING UNDER THIS AGREEMENT.

Standard of Care/Warranties: Services performed by HAI under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, HAI MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES ARISING UNDER ANY STATUTE. Except for the warranty expressly set forth in this paragraph, CLIENT acknowledges and agrees that it has relied on no other representations or warranties and that no other representations or warranties have formed the basis of its bargain hereunder.

Confidentiality: Each party shall retain as confidential all information and data furnished to it by the other party which are designated in writing by such other party as confidential at the time of transmission and are obtained or acquired by the receiving party in connection with this Agreement, and said party shall not reveal such information to any third party, except as required by law (in which case, the party from whom disclosure is required shall give the other party prompt notice of the demand and cooperate in efforts to limit disclosure).

Indemnification: HAI and CLIENT each agree to indemnify, defend and hold harmless the other from and against any and all amounts payable under any judgment, verdict, court order or settlement for death or bodily injury or the damage to or loss or destruction of any real or tangible personal property to the extent arising out of the indemnifying party's negligence in the performance of this Agreement or willful misconduct. The foregoing indemnities are contingent upon: (1) the indemnified party promptly notifying the indemnifying party in writing of any claim which may give rise to a claim for indemnification hereunder; (2) the indemnifying party being allowed to control the defense and settlement of such claim; and (3) the indemnified party cooperating with all reasonable requests of the indemnifying party (at the indemnifying party's expense) in defending or settling such claim. The indemnified party shall have the right, at its option and expense, to participate in the defense of any action, suit or proceeding relating to such a claim through a counsel of its own choosing. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of HAI and CLIENT, they shall be borne by each party in proportion to its negligence.

Term: Unless sooner terminated or extended as provided herein, this Agreement shall remain in full force and effect. Either party may terminate this Agreement at any time by giving seven (7) days written notice of such termination to the other party. Upon such termination of this Agreement, CLIENT shall pay and reimburse HAI for services rendered and costs incurred by HAI prior to the effective date of termination. The rights and obligations of the parties under this Agreement shall survive termination of this Agreement for any reason.

Precedence: These General Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding HAI services, including, without limitation the Agreement for Services and the Proposal. The Agreement of Services shall take precedence over the Proposal.

Fee Schedule: Where lump sum fees have been agreed to between the parties, they shall be so designated in the Agreement attached hereto and by reference made a part hereof. Where fees are based upon hourly charges for services and costs incurred by HAI they shall be based upon the hourly fee schedule annually adopted by HAI.

Limitation of Remedies, Liability and Damages: CLIENT's sole and exclusive remedy in the event of a claim arising out of, resulting from or in connection with this Agreement shall be for HAI to repair, replace or otherwise correct the breach. Other than CLIENT's obligations to make payments that are due and owing under this Agreement, a party's and its affiliates' entire and collective liability arising out of or relating to this Agreement, including without limitation on account of performance or nonperformance of obligations hereunder, regardless of the form of the cause of action, whether in contract, tort (including, without limitation, negligence), statute or otherwise, shall in no event exceed the amounts paid or payable to HAI under this Agreement. NEITHER PARTY NOR ITS AFFILIATES SHALL, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE OTHER PARTY OR ITS AFFILIATES FOR ANY CLAIM BASED UPON ANY THIRD PARTY CLAIM (EXCEPT AS PROVIDED FOR IN THE INDEMNIFICATION PARAGRAPH) OR FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY OR SPECIAL DAMAGES OF ANY NATURE WHATSOEVER, OR FOR ANY DAMAGES ARISING OUT OF OR IN CONNECTION WITH ANY DELAYS, LOSS OF PROFIT, INTERRUPTION OF SERVICE OR LOSS OF BUSINESS OR ANTICIPATORY PROFITS, EVEN IF A PARTY OR ITS AFFILIATES HAVE BEEN APPRISED OF THE LIKELIHOOD OF SUCH DAMAGES OCCURRING.

Insurance: Upon written request, HAI will provide certificates of insurance to the client evidencing coverage for Worker's Compensation, General Liability, Auto Liability and Professional Liability prior to the commencement of services to be provided herein.

Binding Nature and Assignment. This Agreement shall be binding upon and inure solely to the benefit of the parties hereto and their successors and permitted assigns, and nothing in this Agreement shall confer upon any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement. Neither party may, nor shall have the power to, assign or transfer this Agreement without the prior written consent of the other party, except that HAI may without consent assign or transfer this Agreement to a successor to the business of HAI to which this Agreement relates. Any claim relating to the provision of services by HAI, its affiliates or their respective staff will be made against HAI alone.

Approvals and Similar Actions. Where agreement, approval, acceptance, consent or similar action by CLIENT or HAI is required under this Agreement, such action shall not be unreasonably delayed or withheld.

Time is of the Essence. Time is of the essence of this Agreement.

EXHIBIT A**General Terms and Conditions
For the Hughes Proposal and Agreement for Services for:****CLIENT: Brooklyn Schools
for****Project: Fire Alarm Systems Design & Construction Administration Services**

Reference Conditions: Hughes Associates will hereinafter be referenced as HUGHES and the above referenced CLIENT will be referred to as CLIENT. The Project may be hereinafter referenced either as the "Project" or by abbreviation as above set forth.

Entire Agreement: These General Terms and Conditions, along with the Agreement for Services to which these General Terms and Conditions are attached (the "Agreement for Services") and the Proposal attached to the Agreement for Services (the "Proposal") (collectively with the Agreement for Services and the Proposal, this "Agreement"), constitutes the entire agreement between CLIENT and HUGHES, regarding the Project. If HUGHES has commenced work in connection with the Project, all provisions in this Agreement for the benefit or protection of either party shall apply to such activities. There are no prior or contemporaneous, oral or written, representations, understandings or agreements which are not fully expressed in this Agreement. No amendment or change order shall be valid unless it is in writing and signed by an authorized representative of the party against whom such amendment or change order is sought to be enforced.

Relationship of Parties. HUGHES, in furnishing services to CLIENT, is an independent contractor. HUGHES does not undertake to perform any regulatory or contractual obligation of CLIENT or to assume any responsibility for the CLIENT's business or operations.

Subcontracting: HUGHES shall supervise, perform or cause to be performed all work to be accomplished by HUGHES and may call upon the expertise of subcontractors in the performance of the services hereunder.

Severability: The provision of this Agreement shall be severable, and if any clause, sentence, paragraph, provision, or other part hereof shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder hereof, which remainder shall continue in full force and effect.

Billings/Payments: Invoices for services shall be submitted monthly. Payment is due within 30 days of receipt. If payment is not received 30 days of receipt, such fees shall be subject to a service fee of 1.5% per month, and HUGHES reserves the right to pursue all appropriate remedies, including, without limitation, suspending all performance under this Agreement. In the event that services are suspended for nonpayment, HUGHES shall have no liability for any delay or other damage, contractual or otherwise, caused by or arising out of the suspension of services or nonpayment. Acceptance by HUGHES of any payment more than 30 days overdue shall not serve as a waiver of HUGHES's contractual right to suspend service for nonpayment. In the event of nonpayment of fees, CLIENT will be responsible for all costs, including, without limitation, court costs, collection costs, reasonable attorneys' fees, expert fees, and all other costs allowed by law, which may be incurred by HUGHES in pursuit of payment.

Taxes. There shall be added to the charges under this Agreement, and CLIENT shall pay to HUGHES, an amount equal to any taxes, levies and duties, however designated or levied, based upon such charges, this Agreement, the services or materials provided, or their use, including, without limitation, state and local sales and use taxes, which are paid by or are payable by HUGHES, plus interest and penalties, if any, exclusive, however, of United States federal, state or local taxes based on the net income of HUGHES. Notwithstanding the preceding sentences, HUGHES accepts full and exclusive liability for the payment of all employer contributions and taxes measured by the remuneration paid to HUGHES employees as required by all applicable United States federal, state and local laws, rules and regulations.

Waiver: No waiver by either party of any breach, default, or violation of any term, warranty, representation, agreement, covenant, condition, or provision hereof shall constitute a waiver of any subsequent breach, default, or violation of the same or any other term, warranty, representation, agreement, covenant, condition, or provision hereof. All waivers must be in writing and signed by the party against whom enforcement of the waiver is sought. All remedies are cumulative, and the election to pursue less than all remedies shall not be a waiver of the right to pursue any other remedy.

Force Majeure: Obligations of either party under this Agreement shall be suspended, and such party shall not be liable for damages or other remedies while such party is prevented from complying herewith, in whole or in part, due to contingencies beyond its reasonable control, including, but not limited to, strikes, riots, war, fire, acts of God, Injunction, compliance with any law, regulation, or order, whether valid or invalid, of the United States of America or any other governmental body or any instrumentality thereof, whether now existing or hereafter created, inability to secure materials or obtain necessary permits, provided, however, the party so prevented from complying with its obligations hereunder shall promptly notify the other party thereof.

Compliance with Law: In the performance of all services to be provided hereunder, HUGHES agrees to comply with all applicable federal, state, and local laws and ordinances and all lawful order, rules, and regulations of any constituted authority.

Applicable Law; Jurisdiction; Venue: The validity, performance, and construction of this Agreement shall be governed by and construed according to the laws of the State of Maryland exclusive of its conflicts of law provisions. All claims hereunder shall be tried solely and exclusively in the Courts of Baltimore County, Maryland or the United States District Court for the District of Maryland, Northern Division. Each party consents to the jurisdiction and venue of such court. EACH OF THE PARTIES HEREBY KNOWINGLY AND VOLUNTARILY WAIVES ANY AND ALL RIGHTS TO A JURY TRIAL IN ANY PROCEEDING INVOLVING ANY DISPUTE OR MATTER ARISING UNDER THIS AGREEMENT.

Standard of Care/Warranties: Services performed by HUGHES under this Agreement will be conducted in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions. NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, HUGHES MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ANY IMPLIED WARRANTIES ARISING UNDER ANY STATUTE. Except for the warranty expressly set forth in this paragraph, CLIENT acknowledges and agrees that it has relied on no other representations or warranties and that no other representations or warranties have formed the basis of its bargain hereunder.

Confidentiality: Each party shall retain as confidential all information and data furnished to it by the other party which are designated in writing by such other party as confidential at the time of transmission and are obtained or acquired by the receiving party in connection with this Agreement, and said party shall not reveal such information to any third party, except as required by law (in which case, the party from whom disclosure is required shall give the other party prompt notice of the demand and cooperate in efforts to limit disclosure).

Indemnification: HUGHES and CLIENT each agree to indemnify, defend and hold harmless the other from and against any and all amounts payable under any judgment, verdict, court order or settlement for death or bodily injury or the damage to or loss or destruction of any real or tangible personal property to the extent arising out of the indemnifying party's negligence in the performance of this Agreement or willful misconduct. The foregoing indemnities are contingent upon: (1) the indemnified party promptly notifying the indemnifying party in writing of any claim which may give rise to a claim for indemnification hereunder; (2) the indemnifying party being allowed to control the defense and settlement of such claim; and (3) the indemnified party cooperating with all reasonable requests of the indemnifying party (at the indemnifying party's expense) in defending or settling such claim. The indemnified party shall have the right, at its option and expense, to participate in the defense of any action, suit or proceeding relating to such a claim through a counsel of its own choosing. In the event claims, losses, damages, or expenses are caused by the joint or concurrent negligence of HUGHES and CLIENT, they shall be borne by each party in proportion to its negligence.

Term: Unless sooner terminated or extended as provided herein, this Agreement shall remain in full force and effect. Either party may terminate this Agreement at any time by giving seven (7) days written notice of such termination to the other party. Upon such termination of this Agreement, CLIENT shall pay and reimburse HUGHES for services rendered and costs incurred by HUGHES prior to the effective date of termination. The rights and obligations of the parties under this Agreement shall survive termination of this Agreement for any reason.

Precedence: These General Terms and Conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document regarding HUGHES services, including, without limitation the Agreement for Services and the Proposal. The Agreement of Services shall take precedence over the Proposal.

Fee Schedule: Where lump sum fees have been agreed to between the parties, they shall be so designated in the Agreement attached hereto and by reference made a part hereof. Where fees are based upon hourly charges for services and costs incurred by HUGHES they shall be based upon the hourly fee schedule annually adopted by HUGHES.

Limitation of Remedies, Liability and Damages: CLIENT's sole and exclusive remedy in the event of a claim arising out of, resulting from or in connection with this Agreement shall be for HUGHES to repair, replace or otherwise correct the breach. Other than CLIENT's obligations to make payments that are due and owing under this Agreement, a party's and its affiliates' entire and collective liability arising out of or relating to this Agreement, including without limitation on account of performance or nonperformance of obligations hereunder, regardless of the form of the cause of action, whether in contract, tort (including, without limitation, negligence), statute or otherwise, shall in no event exceed the amounts paid or payable to HUGHES under this Agreement. NEITHER PARTY NOR ITS AFFILIATES SHALL, UNDER ANY CIRCUMSTANCES, BE LIABLE TO THE OTHER PARTY OR ITS AFFILIATES FOR ANY CLAIM BASED UPON ANY THIRD PARTY CLAIM (EXCEPT AS PROVIDED FOR IN THE INDEMNIFICATION PARAGRAPH) OR FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, PUNITIVE, EXEMPLARY OR SPECIAL DAMAGES OF ANY NATURE WHATSOEVER, OR FOR ANY DAMAGES ARISING OUT OF OR IN CONNECTION WITH ANY DELAYS, LOSS OF PROFIT, INTERRUPTION OF SERVICE OR LOSS OF BUSINESS OR ANTICIPATORY PROFITS, EVEN IF A PARTY OR ITS AFFILIATES HAVE BEEN APPRISED OF THE LIKELIHOOD OF SUCH DAMAGES OCCURRING.

Insurance: Upon written request, HUGHES will provide certificates of insurance to the client evidencing coverage for Worker's Compensation, General Liability, Auto Liability and Professional Liability prior to the commencement of services to be provided herein.

Binding Nature and Assignment. This Agreement shall be binding upon and inure solely to the benefit of the parties hereto and their successors and permitted assigns, and nothing in this Agreement shall confer upon any other person or entity any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Agreement. Neither party may, nor shall have the power to, assign or transfer this Agreement

without the prior written consent of the other party, except that HUGHES may without consent assign or transfer this Agreement to a successor to the business of HUGHES to which this Agreement relates. Any claim relating to the provision of services by HUGHES, its affiliates or their respective staff will be made against HUGHES alone.

Approvals and Similar Actions. Where agreement, approval, acceptance, consent or similar action by CLIENT or HUGHES is required under this Agreement, such action shall not be unreasonably delayed or withheld.

Time is of the Essence. Time is of the essence of this Agreement.

EXHIBIT A**General Terms and Conditions
For the Hughes Proposal and Agreement for Services for:****CLIENT: Brooklyn Schools****for****Project: Fire Alarm Systems Design & Construction Administration Services**

Reference Conditions: Hughes Associates will hereinafter be referenced as HUGHES and the above referenced CLIENT will be referred to as CLIENT. The Project may be hereinafter referenced either as the "Project" or by abbreviation as above set forth.

Entire Agreement: These General Terms and Conditions, along with the Agreement for Services to which these General Terms and Conditions are attached (the "Agreement for Services") and the Proposal attached to the Agreement for Services (the "Proposal") (collectively with the Agreement for Services and the Proposal, this "Agreement"), constitutes the entire agreement between CLIENT and HUGHES, regarding the Project. If HUGHES has commenced work in connection with the Project, all provisions in this Agreement for the benefit or protection of either party shall apply to such activities. There are no prior or contemporaneous, oral or written, representations, understandings or agreements which are not fully expressed in this Agreement. No amendment or change order shall be valid unless it is in writing and signed by an authorized representative of the party against whom such amendment or change order is sought to be enforced.

Relationship of Parties. HUGHES, in furnishing services to CLIENT, is an independent contractor. HUGHES does not undertake to perform any regulatory or contractual obligation of CLIENT or to assume any responsibility for the CLIENT's business or operations.

Subcontracting: HUGHES shall supervise, perform or cause to be performed all work to be accomplished by HUGHES and may call upon the expertise of subcontractors in the performance of the services hereunder.

Severability: The provision of this Agreement shall be severable, and if any clause, sentence, paragraph, provision, or other part hereof shall be adjudged by any court of competent jurisdiction to be invalid, such judgment shall not affect, impair, or invalidate the remainder hereof, which remainder shall continue in full force and effect.

Billings/Payments: Invoices for services shall be submitted monthly. Payment is due within 30 days of receipt. If payment is not received 30 days of receipt, such fees shall be subject to a service fee of 1.5% per month, and HUGHES reserves the right to pursue all appropriate remedies, including, without limitation, suspending all performance under this Agreement. In the event that services are suspended for nonpayment, HUGHES shall have no liability for any delay or other damage, contractual or otherwise, caused by or arising out of the suspension of services or nonpayment. Acceptance by HUGHES of any payment more than 30 days overdue shall not serve as a waiver of HUGHES's contractual right to suspend service for nonpayment. In the event of nonpayment of fees, CLIENT will be responsible for all costs, including, without limitation, court costs, collection costs, reasonable attorneys' fees, expert fees, and all other costs allowed by law, which may be incurred by HUGHES in pursuit of payment.

Taxes. There shall be added to the charges under this Agreement, and CLIENT shall pay to HUGHES, an amount equal to any taxes, levies and duties, however designated or levied, based upon such charges, this Agreement, the services or materials provided, or their use, including, without limitation, state and local sales and use taxes, which are paid by or are payable by HUGHES, plus interest and penalties, if any, exclusive, however, of United States federal, state or local taxes based on the net income of HUGHES. Notwithstanding the preceding sentences, HUGHES accepts full and exclusive liability for the payment of all employer contributions and taxes measured by the remuneration paid to HUGHES employees as required by all applicable United States federal, state and local laws, rules and regulations.

Waiver: No waiver by either party of any breach, default, or violation of any term, warranty, representation, agreement, covenant, condition, or provision hereof shall constitute a waiver of any subsequent breach, default, or violation of the same or any other term, warranty, representation, agreement, covenant, condition, or provision hereof. All waivers must be in writing and signed by the party against whom enforcement of the waiver is sought. All remedies are cumulative, and the election to pursue less than all remedies shall not be a waiver of the right to pursue any other remedy.

Force Majeure: Obligations of either party under this Agreement shall be suspended, and such party shall not be liable for damages or other remedies while such party is prevented from complying herewith, in whole or in part, due to contingencies beyond its reasonable control, including, but not limited to, strikes, riots, war, fire, acts of God, injunction, compliance with any law, regulation, or order, whether valid or invalid, of the United States of America or any other governmental body or any instrumentality thereof, whether now existing or hereafter created, inability to secure materials or obtain necessary permits, provided, however, the party so prevented from complying with its obligations hereunder shall promptly notify the other party thereof.

Compliance with Law: In the performance of all services to be provided hereunder, HUGHES agrees to comply with all applicable federal, state, and local laws and ordinances and all lawful order, rules, and regulations of any constituted authority.

Applicable Law; Jurisdiction; Venue: The validity, performance, and construction of this Agreement shall be governed by and construed according to the laws of the State of Maryland exclusive of its conflicts of law provisions. All claims hereunder shall be tried solely and exclusively in the Courts of Baltimore County, Maryland or the United States District Court for the District of Maryland, Northern Division. Each party consents to the jurisdiction and venue of such court. EACH OF THE PARTIES HEREBY KNOWINGLY AND VOLUNTARILY WAIVES ANY AND ALL RIGHTS TO A JURY TRIAL IN ANY PROCEEDING INVOLVING ANY DISPUTE OR MATTER ARISING UNDER THIS AGREEMENT.

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