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Vacant / Abandon Building Identification System in the City of Atlanta

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: _____

ABSTRACT

Within the City of Atlanta and the Atlanta Fire Rescue Department (AFRD) the problem existed that there was not a vacant / abandon identification system to adequately inform key stakeholders of possible dangerous conditions, which could lead to injury and/or death, affiliated with these types of buildings.

The purpose of this research was to develop a vacant / abandon building identification system that can enhance the abilities of personnel responding to these types of locations to have more accurate and up to date information, to reduce the likelihood of injuries and/or death. For this applied research project, the researcher used the action research methodology to answer the following questions:

1. How are vacant / abandon buildings defined within the City of Atlanta and outside the City of Atlanta?

2. What type of identification system will be required to identify all vacant / abandon buildings in the City of Atlanta?

3. What are some of the common methods used to identify vacant / abandon buildings in other like-sized cities in the U.S.?

4. What are the benefits and shortcomings of placarding vacant / abandoned buildings?

5. What are the benefits and shortcomings to placing vacant / abandoned buildings on the computer aided dispatch (CAD) system for apparatus within the AFRD?

6. What changes in policy that relates specifically to vacant / abandoned buildings are needed?

The procedures used to complete this research project consisted of trade publications, the World Wide Web, an interview, professional publications, city municipal codes, existing applied research projects, and internal City of Atlanta and AFRD policies and procedures as they pertain to vacant / abandoned buildings.

The results of this research clearly indicated that an identification system of vacant / abandoned buildings was necessary not only for the first responders of public safety, but also for the City of Atlanta to more adequately manage a growing concern throughout this metropolitan region.

The recommendations of this research included an update of policies and procedures within AFRD, but also a proposed ordinance change for the City of Atlanta to properly enhance this interest, which would create a two-fold effect; one, a possible revenue stream for the City and two, having owners of these buildings become more accountable.

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INTRODUCTION

The problem is that the City of Atlanta and the Atlanta Fire Rescue Department (AFRD) do not have a vacant / abandoned building identification system that can inform key stakeholders of possible dangerous conditions, which could lead to potential injury and/or death. This concern will put firefighters at an increased risk while responding to vacant / abandoned buildings, which at times cannot be easily identifiable. This problem also can affect the City of Atlanta, especially its citizens, which is evident with an increased criminal element that comes with an increase of vacant / abandoned buildings throughout portions of a city.

The purpose of this research is to develop a vacant / abandoned building identification system for the AFRD and the City of Atlanta. This will assist first responders on incidents that occur at vacant / abandoned buildings, giving them accurate and up to date information on the status of a building, as well as holding the owners of these buildings accountable for their current state.

The goal is to put a procedure in place for the City of Atlanta to be in compliance with new ordinances that would identify the vacant / abandoned buildings throughout the City of Atlanta, and in turn, AFRD would develop new policies to properly capture this information, so that the first responders would be alerted.

The research that was used concerning the development of an identification system for the City of Atlanta and AFRD was that of action methodology, following are the research questions that were developed to assist in this initiative:

- How are vacant / abandon buildings defined within the City of Atlanta and outside the City of Atlanta?

- What type of identification system will be required to identify all vacant / abandon buildings in the City of Atlanta?

- What are some of the common methods used to identify vacant / abandon buildings in other like-sized cities in the U.S.?

- What are the benefits and shortcomings of placarding vacant / abandoned buildings?

- What are the benefits and shortcomings to placing vacant / abandoned buildings on the computer aided dispatch (CAD) system for apparatus within the AFRD?

- What changes in policy that relates specifically to vacant / abandoned buildings are needed?

BACKGROUND AND SIGNIFICANCE

On November 29, 2006 Firefighter Steven Solomon passed away from injuries that he received while fighting a fire at 137 Elm Street, this was a vacant / abandoned building, and had been vacant / abandoned for over five years. At the time, the City of Atlanta and the Atlanta Fire Rescue Department (AFRD) had only one defined system to identify a vacant / abandoned building. This particular building was not placarded, even though if it had been, with the amount of and location of the fire the placard would not have been visible to even the first arriving unit.

As a recommendation of the event that occurred on Elm Street, identification of these vacant / abandoned buildings became a priority. How will these buildings be identified so that there will be the greatest impact for the first responders? Today, there are currently 18% of all buildings in the City of Atlanta that are vacant / abandoned; this is slightly greater than the national rate of 11% (Census, 2009). With the downturn of economic conditions, there has been an increase in vacant / abandoned buildings within the City of Atlanta. With no discernable way

to identify these buildings, it has become very dangerous for the firefighters that respond to these structures. It has also become dangerous to other public safety officers, as there has been an increase in criminal activity that is associated with vacant / abandoned buildings in a dense metropolitan area.

In the development of an identification system for vacant / abandoned buildings, this will need to be a system of collaboration that can benefit all key stakeholders, to include; other public safety officials, as well as those in the building department. In the City of Atlanta, it falls upon the building department to identify vacant / abandoned buildings and it is through their enforcement section that any code violations will be acknowledged and prosecuted, if necessary. This effort is enhanced with the enforcement power given to AFRD through the International Fire Code (2009), specifically the placarding of vacant / abandoned buildings, which would also require the removal of any combustible material and maintenance of any existing fire protection system, if applicable (City of Atlanta, 2008).

This applied research project specifically relates to the Executive Analysis of Community Risk Reduction course (FEMA, 2011). Located in Unit 2: Assessing Community Risk, the following objectives that were covered relate directly back to community risk, they include; assessing the community risk, analyze the community, identify hazards and causal factors, and assess vulnerabilities. This research has a direct impact on community risk reduction, in that it is taking a proactive approach in developing a system that will enhance the capabilities of the key stakeholders within the City of Atlanta and AFRD. This applied research project also relates to goal three of the United States Fire Administration (FEMA, 2010) strategic objectives, which states, "Improve the fire and emergency services' capability for response to and recovery from all hazards" (p 13). This improvement is evident in the collaboration and coordination with

internal stakeholders, but also developing a system that will benefit external stakeholders, specifically working with the building department so that this system will be crosscutting between departments within the City of Atlanta.

LITERATURE REVIEW

During the research of identifying systems for vacant / abandoned buildings, there were many avenues that presented themselves, from the trade publications to professional publications, the researcher found statistical data, as well as ordinances that pertain to the identification of vacant / abandoned buildings. This research was developed from one incident that researcher as the company officer, lost a member to a line of duty death (LODD) in a vacant / abandoned building. As a result of the National Institute of Occupational Safety and Health (NIOSH) investigation (Berardinelli, 2009), there were two recommendations that pertain directly to this research; one, "Ensure that an initial size-up of the incident scene is conducted before beginning interior fire fighting operations" (p.1), and two, "Fire departments, municipalities, and standard setting bodies such as the National Fire Protection Association (NFPA) should consider developing and implementing a system to identify and mark unoccupied, vacant or abandoned structures to improve fire fighter safety." (p.2) By not working on these initiatives there could be situations at future incidents that meet this same criteria that led to the LODD in Atlanta, GA and could be replayed yet again. These types of initiatives are not new to the fire service, according to Tom Brennan, having a coordinated and deliberate offensive attack can only be accomplished after a proper size-up, which would correspond to the type of structure in which personnel are going to conduct firefighting operations. This lack of coordination has led directly to an increase in injuries as it relates to these types of structures.

(Brennan, 1997) It becomes clear the impact that can occur at an incident if a size-up and coordination are not accomplished and how it can lead to injuries and/or death on the fireground.

From the period between 1998 and 2008 NIOSH conducted a study of fire fighter fatalities, during this period there were two factors that are relevant to this research that were determined; all the fire fighter fatalities occurred at 84 incidents, of which 62 were at structures that were known or suspected to be occupied at the time the fire fighters arrived at the scene. In addition, of the 84 incidents, 65 involved offensive fire-fighting tactics. (NIOSH Alert, 2010) These indicate clear examples of just two of the recommendations from the NIOSH report from the LODD in Atlanta, GA. While researching, the author also found others that are attempting to develop an identification system; they in fact uncovered similar concerns, according to Daniel Dow, "If a system were in place to indicate human life was at risk in an otherwise vacant structure, the structure should not be entered." (p.7) This reinforces the contention that Brennan discussed as it relates to a size-up related to the specific type of structure, in this case it would refer to the vacant / abandoned building size-up. This is further reinforced from an article *Fires in Vacant Occupancies*, where John "Skip" Coleman reiterates that after a structure has been determined to be vacant and listed as such, the fire department would send a document to the homeowner as it pertains to the property and that the fire department will conduct interior operations only under certain criteria, specifically if they hear or see a possible victim. (Coleman, 2004) Byron Kennedy, succinctly states, "If the fire service does not modify how we negotiate encounters with vacant structures, firefighters will continue to die because of them." (p. 7)

The researcher also identified information from professional publications that were relevant as it pertains to vacant / abandoned buildings, specifically how can vacant structures

impact a municipality. The research identified the criteria of the responsibilities that were

required by the building's owner. (Seattle, 1996) The research also found risk assessments that

should be taken towards vacant / abandoned buildings, which was taken from a more strategic

approach of how these types of structures might impact local areas, to include their economies

and the steps to take in securing these risks; this approach was from an international concern.

(Aviva, 2010) From a national response to vacant / abandoned buildings, St. Paul, Minnesota

was very progressive in identifying costs that are associated with having these types of structures

throughout their city and their impact. (Havens, 2007) Specifically related to finding those types

of buildings that fall into the criteria of vacant / abandoned, in which no city is immune to these

types of buildings, and in turn finding value. It is working through various outlets that can

transform a vacant / abandoned building into a new economically viable property. (Norbut,

2003) The researcher also found how several municipalities worked through an organization of

Mayor's and how they offered very direct information as it relates to individual municipalities

and there their methods to identify the direction necessary to address the concern of vacant /

abandoned buildings, this publication offered multiple approaches to the vacant and abandoned

properties concern. (Dailey, 2006)

        The researcher found statistical data to be very relevant as it pertains to vacant /

abandoned buildings, both from a national perspective and that of a localized perspective, one

that specifically relates to Atlanta, GA. Nationally, In Ahrens study (as cited in NIOSH Alert,

2010) NFPA reported approximately 30,000 fires each year from 2002 through 2005 in vacant

buildings. As the statistical data related to fire fighter injuries and/or death, the national data

stated that there were 269 firefighters that died on the fire ground from 1998 through 2008, with

62 of the 84 incidents taking place at vacant structures, as related to Fahy's response to Merinar.

(as cited in NIOSH Alert, 2010) While AFRD reported 3,241 total fires from 2002 through July

2011, of those there were 1,276 that were in vacant / abandoned buildings. (see Figure 1)

AFRD reported 32 fire fighter injuries, and no firefighter deaths at non-vacant structures during

the period of 2002 through 2011 (July), while fourteen firefighter injuries to include one

firefighter LODD in vacant structures during the same period. (EMBRS, 2011) The City of

Atlanta according to U.S. Census data has approximately 18.8% of its housing units vacant,

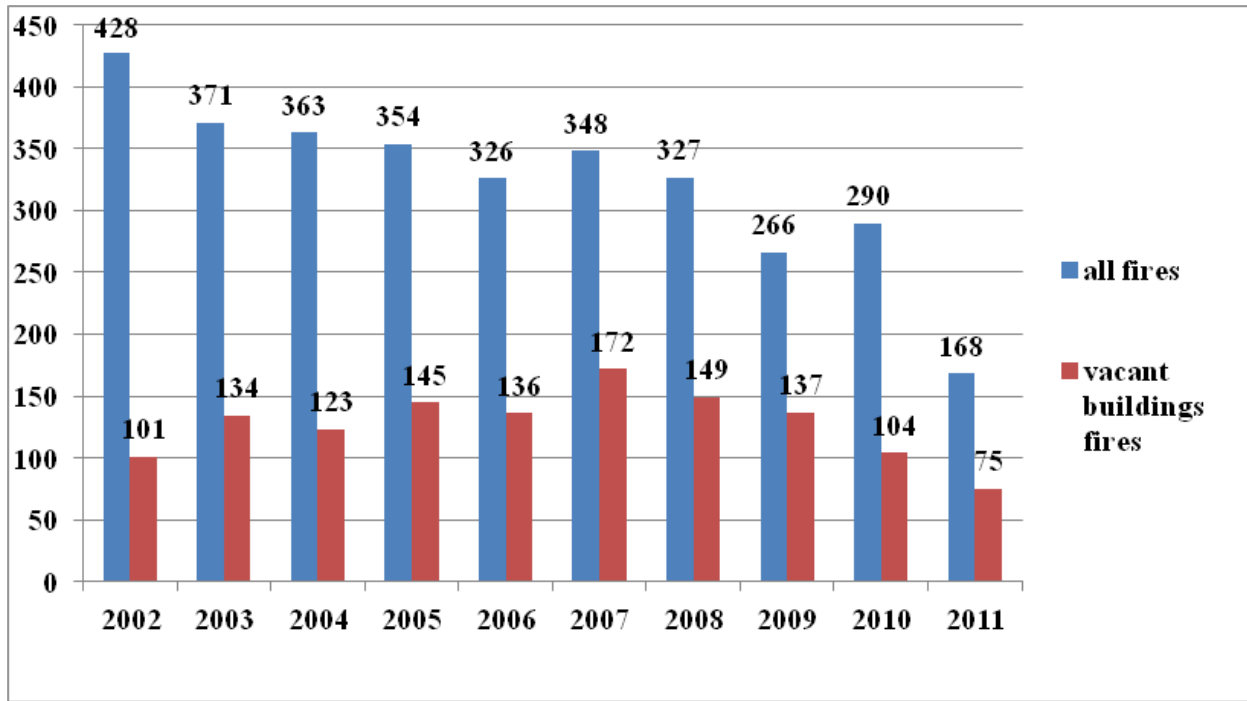which exceeds the national average of 11.8% of housing vacancies. (Census, 2009)

Figure 1 - Total Fires (AFRD)

In the literature review, various ordinances were reviewed to identify systems that could

be enhanced to fit the City of Atlanta and its need as it relates to vacant / abandoned buildings,

key municipalities were identified that had components that would assist the City of Atlanta and

AFRD as it relates to these types of buildings. A registration component was one of the first

criteria that this researcher found, which could meet the needs of the City of Atlanta and AFRD, these were found in ordinance from Minneapolis, MN (City of Minneapolis, 2008); St. Paul, MN (City of Saint Paul, 2009); Sacramento, CA (City of Sacramento, 2007); El Paso, TX (City of El Paso 2010); and Chicago, IL (City of Chicago, 2008); currently the City of Atlanta does not have an ordinance that fits these criteria. In addition, the creation of a fee schedule to be placed on the registry and an annual reoccurring fee schedule were present in all municipalities mentioned, they all included as well, the securing of vacant / abandoned buildings as part of the ordinance, Atlanta, GA does have that particular section that requires the owner to secure a vacant / abandoned building.

The final component of the literature review used the interview as a component; this was done due to the lack of subject matter expertise as it relates to the communication component of dispatching, specifically the computer aided dispatch system and how that can assist in the identification system of vacant / abandoned buildings. The interview took place to gain insight into the criteria that would be required to tag a building as vacant / abandoned and how that would affect the dispatch of the apparatus sent to that location. (D. Branan, personal communication, July 6, 2011)

This information discussed throughout the literature review developed a sense of urgency with the researcher, especially as it relates with a need to identify the vacant / abandoned buildings to assist upon their arrival those personnel dispatched would have the critical information to make a better decision for those personnel they are responsible to protect. Identifying existing municipalities that have the criteria of an identification system, specifically for vacant / abandoned buildings in-place that would make a transition more seamless to a comprehensive transition to include all the factors that would make this initiative a success.

Having identified tactical considerations that would be enhanced, as well as strategic

considerations makes this information a true urgency, so that what occurred on Thanksgiving

2006 will not have occurred without due diligence of developing a comprehensive identification

system for the City of Atlanta, so that the key stakeholders will have additional information to

assist in a more complete initial size-up, as discussed earlier as a key to a safer operation.

PROCEDURES

The research used in this applied research project began with a thorough literature

review; this began specifically with the review of the event that was the catalyst for this project.

After a complete review of this event (Berardinelli, 2009), the initiative was developed from

what was specifically identified in the report, as recommendations. The Learning Resource

Center located at the National Fire Academy was the first location identified to retrieve any

critical information as it pertained to this initiative, which was first discussed with the Instructors

of the course, Executive Analysis of Community Risk Reduction.

Once the initiative was developed a systematic approach towards the additional critical

information was developed so that a thorough understanding of the event and then the steps

taken to possibly prevent an event such as that from happening again. Information was gathered

on the initial stages of how an incident begins and the steps a fire department takes to gain

control of an incident, this was critical, due to the fact that events like this tend to repeat

themselves.

Statistical data was collected from various sources that could show a correlation between

a lack of information and an incident that has an unfavorable outcome, resulting in injuries

and/or death of firefighters.   This information would also be collected from a national and local

level to either show similarities or disparities, which could then point in the direction of the

organization and their lack of capabilities in handling incidents of this magnitude. It could also

point to a similar pattern across the nation, and even internationally which create situations that

can be addressed with collaboration of internal and external stakeholders that are directly related

to the fire service and can be corrected.

Supportive documentation was also collected from like-sized municipalities; this was

accomplished due to the research conducted, which found these like-sized municipalities

conducting their approach to an identification system in a manner that would be beneficial to

look further and more in depth. The information that was collected from the like-sized

municipalities specifically centered on their ordinances and how they were structured to gain

maximum benefit from their cities, the different types of departments and specifically their fire

departments. In addition, there was research conducted that centered around how other

professional organizations would answer questions with similar concerns, even if they were not

of a public safety type of response, but more of a general safety response to that of the

community and its citizens, as well as the visitors of the city.

Additional supportive documentation was taken from the host organization; this was

conducted to show the efficiencies and deficiencies in order to gain new insights and develop

new policies and procedures to better address the stated need of the city. There was also an

interview conducted, due to a lack of institutional knowledge as it relates to communications and

specifically the computer aided dispatch capabilities in order to gain insight led to the interview

being conducted.

The limitations that were present during this applied research project consisted of not knowing the steps that were necessary for other municipalities to make the corrections as it was related to the changes in their ordinances, these were the ordinances that enhanced the capabilities of the municipalities as it related directly to vacant / abandoned buildings. Also, an additional limitation was not knowing the catalyst for the change, was there an event that occurred which precipitated a new direction, was it monetary, or did the municipalities have the foresight to consider the current economic indicators and in turn know they would want to be prepared, or were these municipalities concerned by the impact of their citizens as to what vacant / abandoned buildings could do to their quality of life.

RESULTS

Based on the literature reviewed and the personal interview conducted for this applied research project, the researcher is prepared to analyze the relevance of the topic and scope of the following research questions.

How are vacant / abandon buildings defined within the City of Atlanta and outside the City of Atlanta? The definition of vacant building according to the City of Atlanta, is a structure that is unoccupied, currently there is no definition for an abandoned building. (City of Atlanta, 2008) This leaves a lot room to work in enhancing the definition and creating additional supportive definitions. As stated in the City of Chicago ordinance, the definition is more extensive and has multiple layers to address possible unknown factors; "vacant means a building which is lacking habitual presence of human beings who have a legal right to be on the premises, or at which substantially all lawful business or construction operations or residential occupancy has ceased, or which is substantially devoid of content. In determining

whether a building is vacant, it is relevant to consider, among other factors, the percentage of

the overall square footage of the building or floor to the occupied space, the condition and

value of any items in the building and the presence of rental or for sale signs on the property;

provided that a residential property shall not be deemed vacant if it has been used as a

residence by a person entitled to possession for a period of at least three months within the

previous nine months and a person entitled to possession intends to resume residing at the

property; and further provided that multifamily residential property containing ten or more

dwelling units shall be considered vacant when ninety percent or more of the dwelling units

are unoccupied." (section (e)) According to the City of Minneapolis ordinance vacant refers

to; "a vacant building is one that is: (1) Condemned; or (2) Unoccupied and unsecured for five

(5) days or more; or (3) Unoccupied and secured by means other than normally used in the

design of the building for thirty (30) days or more; or (4) Unoccupied and had multiple

housing maintenance, fire or building code violations existing for thirty (30) days or more; or

(5) Unoccupied for a period of time over three hundred sixty-five (365) days and during

which time an order has been issued to correct a nuisance condition pursuant to section

227.90; or (6) A vacant commercial or residential building or structure, which is unable to

receive a certificate of occupancy due to expired permits, or demonstrated work stoppage of

one hundred eighty (180) days or more as determined by the building official." (section

249.80 (a))

       These are extensive definitions of how municipalities define the terms vacant and

abandoned; the International Association of Fire Chiefs (IAFC) has developed the following

definitions; In Grorud's study (as cited in NIOSH Alert, 2010), "abandoned (or derelict) refers

to a structure that is not being used for any purpose and is not being maintained or preserved

for some future use or occupancy. In many cases, the building could be classified as a public

nuisance awaiting demolition. A building in this condition typically has no value or negligible

value. Vacant refers to a building that is not currently in use, but which could be used in the

future. The term vacant could apply to a property that is for sale or rent, undergoing

renovations, or empty of contents in the period between the departure of one tenant and the

arrival of another tenant. A vacant structure has inherent property value, even though it may not

contain valuable contents or human occupants. Unoccupied generally refers to a structure that

is not occupied by any persons at the time an incident occurs. An unoccupied building could be

used by a business that is temporarily closed (i.e., overnight or for a weekend). The term

unoccupied could also apply to a building that is routinely or periodically occupied, but the

occupants are not present at the time an incident occurs. A residential structure could be

temporarily unoccupied because the residents are at work or on vacation. A building that is

temporarily unoccupied has inherent property value as well as valuable contents. Evacuated

refers to a building that was occupied (or could have been occupied) at the time an incident

occurred; however, all the occupants have self-evacuated, have been assisted in evacuating, or

have been rescued by fire fighters. At this point, there is no possibility of saving the lives of

any remaining occupants. A building that has been evacuated generally has inherent property

value as well as valuable contents." (p. 3)

What type of identification system will be required to identify all vacant / abandon

buildings in the City of Atlanta? The type of identification system that will be required to

identify all vacant / abandoned buildings in the City of Atlanta will need to be multi-layered

across multiple departments within the city. The different systems that have already been

discussed have had support from the executive branch of the government; this is evident on the

ordinances that have been developed that support the municipalities and the citizens, this would

also be seen from the legislative function of each entity discussed. The actual departments that

oversee the daily operations, in cases such as in Minneapolis, MN, the Fire Chief and Police

Chief have the authority to act on buildings that meet the criteria of vacant / abandoned. In the

City of Atlanta, it is the Bureau of Buildings' Inspections section that is responsible for

enforcement of housing code violations. In Sacramento, CA the vacant building code has

included the use of neighborhood associations to assist in the identification of vacant buildings,

these groups have become part of the Code Enforcement Housing and Dangerous Building

Team. The system that will be developed will be required to have the capacity to integrate all

internal departments within a municipality, as stated previously the assistance of organized

groups within a municipality also has merit if this type of system is to receive the buy-in that

would be necessary for a success.

What are some of the common methods used to identify vacant / abandon buildings in

other like-sized cities in the U.S.? The like-sized cities that were researched as it relates to

common methods used to identify vacant / abandoned buildings include, Minneapolis, MN, St.

Paul, MN, Sacramento, CA, El Paso, TX, and a slightly larger city, Chicago, IL. These

municipalities had progressive forward thinking ordinances' that recognized the urban blight

(City of El Paso, 2010) that was occurring in their respective regions of the country and placed

the onus of responsibility for these types of buildings back on the owners. They also looked at

possible avenues in which each of the different cities could affect change and stimulate growth

so that these types of buildings would be vacant / abandoned for brief periods of time. In

addition, there were different types of marking the building would undergo so that when public

safety responded to these types of buildings there would be some outward sign that would give

the responding personnel a warning to the type of building they might have to enter. These

types of markings include a placard that would be displayed on all sides of the structure to alert

first responders and citizens alike to the dangers that are within this building. This type of

placard can be color coded, as is the case in Atlanta, GA, where there are red placards that

signify the building is extremely dangerous and not to enter in any situation. This is very

similar to the type of system that Deputy Chief John Coleman describes in Toledo, OH; there

buildings that meet the requirement for extremely dangerous are placarded with florescent

signs on at least two sides to alert incoming first responders. (Coleman, 2004) NIOSH along

with the Fire Department of New York (FDNY) have developed a similar marking system that

involves having a blank square placed on the sides of a vacant / abandoned building, this would

let the first responders know that this building would have normal stability at the time of

marking. This system escalates to a line diagonally placed across the square, to alert the

responders of interior hazards, and to take caution if making an entry, the final marking would

be that of an "X" filling the square, this would alert the first responders not to make entry due

to extremely dangerous conditions. This system is also discussed in the ARP submitted by

Daniel Dow for the Natick Fire Department, Natick, Massachusetts. (Dow, 2009)

     What are the benefits and shortcomings of placarding vacant / abandoned buildings? The

benefit of placarding is that the vacant / abandoned building has been identified through a

system that has been developed to capture these types of buildings. That would be the initial

phase of a process, the first being identification, the second phase of this process would that of

marking a building that fits the definition and has been identified by the appropriate entity, this

marking would be to alert or warn the incoming first responders of potential hazards that exist

within this building. It also alerts others of potential dangers that might affect the local

neighborhood and steps that can be taken to alter the change that can lead to other properties falling into a similar situation. The shortcomings from a first responder perspective, especially a fire perspective, is that if there is heavy fire involvement, it may make the placards obscure and difficult to identify, therefore, decisions may be made without complete knowledge, which may lead to a catastrophic consequence. This shortcoming would need to lead to vigilance on the types of buildings within each of the territories a fire station has a responsibility. In addition, if there is not a system that follows up with verifying existing vacant / abandoned buildings and looking for additional buildings that meet the identified definitions, then there will be unidentified buildings that will continue to grow and lead to issues that can negatively impact those that respond.

What are the benefits and shortcomings to placing vacant / abandoned buildings on the computer aided dispatch (CAD) system for apparatus within the AFRD? The benefit of placing (tagging) vacant / abandoned building on the CAD system is that this would be part of a system that has been developed to capture these types of buildings. This would be only a component of an overall system used for identification, it is here that Deputy Chief John Coleman, Toledo Fire Department designates these type of buildings as code red, which will alert the responding personnel of the possible dangers of the building. (Coleman, 2004) The shortcomings from using a system such as this are twofold; one, any system would require maintenance or follow-up, this would need to be on a consistent basis so that the information established is accurate and credible. Two, in speaking with the subject matter expert in relation to a project that would add data to the CAD system so that when dispatched the responding units would be notified of the critical information prior to arrival and more effective situational awareness would deliver a better command presence and decision making. The drawbacks to the use of the CAD system to deliver this information would be that the CAD only recognizes when an address is identified, and usually a vacant / abandoned building will not have phone capabilities to prompt the CAD system to display the

needed information. Also, the critical information added to a particular address, which is referred to as tagging an address are time / date sensitive, meaning that unless this information is updated on a consistent basis after a period of time, it will automatically delete from the address that it was tagged to. (D. Branan, personal communication, July 6, 2011)

What changes in policy that relates specifically to vacant / abandoned buildings are needed? As mentioned previously the consistency of information collected is a key component is developing an effective system. The ability to tag on to an existing policy would be very effective, especially if the existing policy has similar timeframes and requirements that will enhance the development of an additional requirement, such as identifying vacant / abandoned buildings. The policy changes would need to have the buy-in from those that will be collecting the information, no matter how good the initiative may appear to be, if the personnel collecting the data do not see the value, the initiative will not be successful. The policy at the departmental level is only one component of the overarching goal of the entire identification system; the policy will only be effective if the system is complete and supported. (Appendix A)

DISCUSSION

The initiative of looking at developing an identification system for vacant / abandoned buildings has a multi-faceted approach, initially the catalyst for this research topic must be present, and this is in direct relation to an event that occurred in which a member of AFRD died while operating at a vacant / abandoned building. The initial research was to find organizations that had developed identification systems so as to better inform first responders prior to operating at these types of incidents, so that personnel would have better situational awareness in order to increase their decision-making capabilities. The research began to look beyond the organizational level to a more strategic approach, and look at the municipality as a whole to find

a system, when discussing this system, the researcher found that there were many parts to make it effective, it was no longer just the responsibility of a fire department, but the responsibility of the entire local government, as well as its citizens.

Looking at like sized municipalities that has similar concerns as stated in the ordinance from El Paso, TX, "contribute to commercial and residential blight", (section 18.40.010 (B)) this is common symptom of what is occurring across the United States. With a common cause identified, the next step was to look at how each of these like sized cities defined their concerns so that these ordinances were as comprehensive as possible. The key definition that this researcher looked at first was how these jurisdictions defined vacant and abandoned, was there a common theme among them, and compared to Atlanta, GA did these definitions coincide or were they completely off target. According to the ordinance for Atlanta, GA vacant is referred to as an unoccupied structure (City of Atlanta, 2008), where as El Paso, TX it states; "vacant means any building, structure, or portion thereof, that regardless of its structural condition, is not occupied during the relevant vacancy period and to which any one of the following conditions apply." (section 18.40.020 (B)) This clearly demonstrates that a futuristic approach was used in determining where the City of El Paso was going when drafting this ordinance. It was also clear that other cities were also using this same approach, as stated earlier; Minneapolis, MN (City of Minneapolis, 2008) used a very similar response, as did Chicago, IL City of Chicago, 2008), and St. Paul, MN (City of St. Paul, 2009). These definitions set the tone for the researcher that there was a significant shift necessary to become better rounded as it pertains to identifying these types of buildings.

As the researcher reviewed the existing systems, it became apparent that an expanded look at the way an organization looks at these concerns, and also the way the municipalities

looked at it as well. Creating an overarching goal of more inclusion within the different departments of a municipality, to even include the use of neighborhood groups in its identification of vacant / abandoned buildings, this was accomplished by Sacramento, CA in their development of the ordinance on vacant / abandoned buildings. (City of Sacramento, 2007) The insight that these municipalities offered broadened the scope of how to address the vacant / abandoned buildings in other regions.

The implications of changing the way the City of Atlanta conducts its practice of identifying vacant / abandoned buildings, would be very beneficial not only to the different departments that would obviously be affected, but most importantly to include key stakeholders, such as the citizens, with their support an initiative such as this would have a greater likelihood of success. This would have to be multi-pronged approach, that would include all departments, to include, but limited to; the fire department, police department, and bureau of buildings, a key end goal would be that of sustainability, looking back in a consistent manner to validate that the mission of this initiative is still on task or does it need to be updated to fit the needs of the city, a living goal would accomplish more over a greater span of time.

RECOMMENDATIONS

The fact the there have a number of fires in vacant buildings (EMBRS, 2011) and that AFRD's most recent LODD resulted from an incident in a vacant / abandoned building, the need to develop an identification system that will benefit AFRD, the City of Atlanta, but most importantly to protect its citizens is a necessity. The approach will be to first develop a policy within AFRD to track the vacant / abandoned buildings, this can be accomplished through joining a task that is already performed by members of AFRD, a task that is performed twice a

year, this is the bi-annual hydrant test. The hydrants throughout the City of Atlanta are checked for their functionality within each fire stations territory, this requires that every street in every territory is driven by fire apparatus; this opportunity will give the data for all vacant / abandoned building. The development of the policy, clearly defining the all terms and establishing clear expectations of each department will assist in making the transition from the current ordinance to one that will have the desired impact.

Including local leaders will be essential as well as the inclusion of the citizens in the neighborhoods, with an approach to so the value of this change, to better define, to gather input from the citizen who lives next door to a vacant / abandoned building, to show how this can assist in better decision making if there was an incident at a building that was vacant or abandoned. These would direct a positive outcome for change; the buy-in would also be needed internally, within AFRD, to show personnel how already conducting a task, hydrant inspection, and adding the responsibility of assisting the bureau of buildings that we can make a positive impact.

The problem was initially stated, that within the City of Atlanta and the Atlanta Fire Rescue Department the problem exist that there was not a vacant / abandon identification system to adequately inform key stakeholders of possible dangerous conditions, with a development such as has been described, it would be possible to answer this question. The steps would be methodical and well planned to maximize on what other municipalities have already accomplished so as to benefit the citizens and departments within the City of Atlanta.

The research conducted has clearly demonstrated that there are systems that have been developed throughout varied municipalities and regions, they have been successful and have

continued to thrive. Following these steps, it has become apparent that a successful system can be developed for the City of Atlanta.

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Appendix A

Hydrant Inspection & Vacant / Abandoned Building Identification SOP (Draft)

ATLANTA FIRE RESCUE DEPARTMENT

Hydrant Inspection & Vacant / Abandoned Building Identification		000.0	
Distribution:	All Department Personnel	**Effective Date:**	2011
Pages:	**9**	**Revision Date:**	2012
Approving Authority:		**DRAFT**	

Mission Statement:
The Atlanta Fire Rescue Department shall provide prompt quality service to our stakeholders that promotes safety, security, enhances sustainability, and enriches the quality of life through professional development and dedication to service.

1. **REFERENCES**

    1.1. **AMERICAN WATER WORKS ASSOCIATION**- Installation, field testing, and maintenance of fire hydrants (AWWA Manual M17)

    1.2. **The Atlanta Housing Code** – Policy and Administration

2. **PURPOSE**

    2.1. To establish a uniform method for inspecting all fire hydrants in the City of Atlanta, to ensure that they are working correctly and reporting any repairs that are needed to the water department.

    2.2. To establish a uniform method for indentifying all vacant / abandoned buildings within the City of Atlanta, to ensure that they are properly recorded and reported to the Building Department.

3.   **POLICY**

     3.1.   It is the policy of the Atlanta Fire Department that all fire hydrants in the City of Atlanta be inspected semi-annually (spring & fall).

     3.2.   It is the policy of the Atlanta Fire Department that all vacant / abandoned buildings will be identified and reported while conducting the semi-annual fire hydrant inspections in the City of Atlanta (spring & fall).

4.   **CANCELLATION**

     4.1.   This standard operating procedure cancels and supersedes AFD.SOP.01.08, effective April 26, 2001, and all other directives, practices and procedures in conflict.

5.   **SCOPE**

     5.1.   All sworn Fire Department personnel assigned to Operations.

6.   **DEFINITIONS**

     6.1   Hydrant identification number: This is the number that is assigned to each hydrant, which identifies that specific hydrant from any other.

     6.2   Repair identification number: This is the number that is assigned to each repair form, which identifies that specific repair from any other.

     6.3   Identification (Address) number: this will be the given address / plot number for each of the identified vacant / abandoned buildings.

     6.4   Vacant / Abandoned Building: A building or portion of a building, which is:

a. Unoccupied and unsecured. A building or portion of a building meeting this definition is deemed a category I building.

b. Unoccupied and secured by other than normal means. A building or portion of a building meeting this definition is deemed a category I building.

c. Unoccupied and a dangerous structure. A building or portion of a building meeting this definition is deemed a category III building.

d. Unoccupied and condemned. A building or portion of a building meeting this definition is deemed a category II building.

e. Unoccupied and has multiple housing or building code violations. A building or portion of a building meeting this definition is deemed a category II building.

f. Condemned and illegally occupied. A building or portion of a building meeting this definition is deemed a category II building.

g. Unoccupied for a period of time over three hundred sixty-five (365) days and during which time the enforcement officer has issued an order to correct nuisance conditions. A building or portion of a building meeting this definition is deemed a category I building.

For the purpose of regulating vacant buildings, the following additional categorical standards may also apply:

Any category I building or portion thereof may be deemed a category II building where the building or portion thereof would also meet the combination of any two (2) category I classifications standards under this section.

Any category I building or portion thereof may be deemed a category II building where the building or portion thereof also meets the definition of a vacant structure, for a period greater than thirty (30) days, no more than one (1) boarded window.

Any category II building or portion thereof may be deemed a category III building where the building or portion thereof also meets the definition of a nuisance building or has been a category II vacant building for more than twenty-four (24) consecutive months.

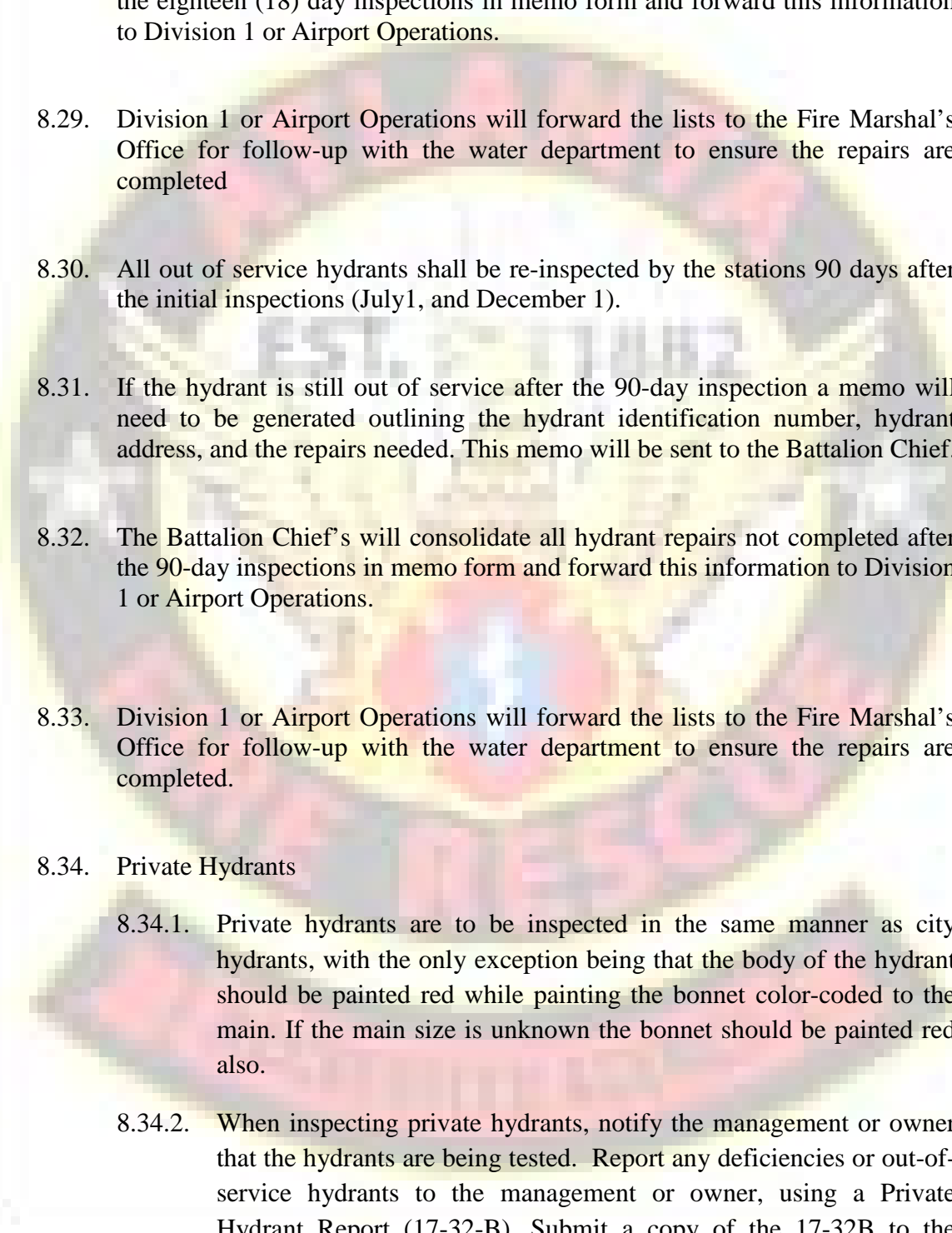6.5   CAD: Computer Aided Dispatch

7.   **RESPONSIBILITIES**

7.1.   It is the responsibility of the Deputy Chief of Operations, the Assistant Chiefs of Division One, the Assistant Chief of the Airport and Battalion Chiefs of Division One, and the Airport to comply with and ensure adherence to this procedure.

7.2.   It shall be the responsibility of the Company Officers or OIC's to ensure that this procedure is adhered to, and to maintain records of all hydrants that are inspected in his/her assigned territory.

7.3.   It shall be the responsibility of the Company Officers or OIC's to ensure that this procedure is adhered to, and to report the records of all vacant / abandoned buildings that are identified within his/her assigned territory to the office of Resource Management.

7.4.   Deviations from this policy must have prior approval from the corresponding Battalion Chief.

8.   **ACTION**

8.1.   The Battalion Chief shall supply companies with the tools and equipment needed to conduct the inspection.

8.2.   Hydrant inspection in the spring will begin on the first Monday of April.

8.3.   Hydrant inspection in the fall will begin on the second Monday of September.

8.4.   All hydrants shall be painted during the spring hydrant tour.

8.5.   All hydrants shall be washed with soap & water and will be painted as needed during the fall hydrant tour.

8.6.   City fire hydrants shall be painted silver with the bonnet color to correspond to the appropriate main size.

8.6.1.   12 inch main or smaller - silver

8.6.2.   24 inch main - yellow

8.6.3.   36 inch main - green

8.7. Companies shall complete hydrant inspections forty-five (45) days after once they have been started.

8.8. During the inspection, the Hydrant Record Card (17-32-A) shall be checked for accuracy of information by the OIC. All changes and discrepancies shall be corrected and the information should be updated on the hydrant database.

8.9. The total amount of hydrants each station inspects will be evenly distributed among the A, B, and C shifts

8.10. All hydrant cards will be assigned to each shift and rotated by colors (Blue, Green, and Red) between the three shifts on a yearly basis in the spring. This will eliminate any one shift from inspecting the same hydrants more than one year.

8.11. Each hydrant will be assigned its own specific hydrant identification number.

8.12. As new hydrants are added to a respective territory a colored hydrant card (17-32) will be completed for this hydrant and a number assigned to it.

8.13. On the hydrant card (17-32) a street number will be assigned to each hydrant. If there are no buildings near the hydrant, the street number should be estimated and assigned using the buildings in that area.

8.14. If there are two hydrants side by side at the same location both hydrants may have the same street number, but they will need to be assigned different hydrant identification numbers.

8.15. If for some reason a hydrant is removed from your territory the hydrant identification number cannot be used for any other hydrant.

8.16. In the event that the Water Department changes a hydrant from one manufacturer to another (example: Mueller to Clow), but the location does not change, then it will retain the same hydrant identification number. At this time the hydrant card (17-32) and the hydrant database should be updated with the new changes that have been made.

8.17. Division I will be responsible for issuing new hydrant identification numbers to the companies, as needed.

8.18. Information gathered concerning hydrant inspections and repairs should be updated on the hydrant web page on a daily basis.

8.19. A visual inspection shall be made of all hydrants during day-to-day travel within each battalion to determine if parts are missing or any damage has occurred that would require immediate repair. If a hydrant is discovered to need parts or repair then the appropriate action should be completed to remedy the problem.

8.20. To properly check a hydrant to ensure it is functioning open main valve to flush hydrant and check its operation. If water is discolored by sediment, the hydrant should be flowed until the water is reasonably clear. Hydrants should be opened and closed slowly and only opened partially not opened fully. This will prevent water in that area from becoming stirred up in the main, resulting in the residence receiving muddy water.

8.21. After closing the hydrant, drainage should be checked by observing the water receding in the barrel.

8.22. When City hydrants are found out-of-service the OIC shall place an out-of-service disk on the hydrant.

8.23. The OIC should complete a hydrant repair form on the hydrant database and forward it to the Battalion Chief.

8.24. The Battalion Chief shall consolidate the hydrant repair forms from each station, in memorandum form, on a daily basis. This report shall be forwarded to the Water Department Operations Via Battalion 3; it is to be stamped received and returned to the deliverer prior to departure.

8.25. A follow-up inspection shall be conducted nine (9) working days after the initial inspection. The Battalion Chief shall maintain a working list of hydrants that are out of service, or in need of repair for a follow-up inspection to ensure compliance.

8.26. If the hydrant has not been repaired after the nine (9) day inspection an eighteen (18) day inspection should be completed after the initial inspection.

8.27. If the hydrant is still out of service after the eighteen (18) day inspection a memo will need to be generated outlining the hydrant identification number, hydrant address, and the repairs needed. This memo will be sent to the Battalion Chief.

8.28. The Battalion Chief's will consolidate all hydrant repairs not completed after the eighteen (18) day inspections in memo form and forward this information to Division 1 or Airport Operations.

8.29. Division 1 or Airport Operations will forward the lists to the Fire Marshal's Office for follow-up with the water department to ensure the repairs are completed

8.30. All out of service hydrants shall be re-inspected by the stations 90 days after the initial inspections (July1, and December 1).

8.31. If the hydrant is still out of service after the 90-day inspection a memo will need to be generated outlining the hydrant identification number, hydrant address, and the repairs needed. This memo will be sent to the Battalion Chief.

8.32. The Battalion Chief's will consolidate all hydrant repairs not completed after the 90-day inspections in memo form and forward this information to Division 1 or Airport Operations.

8.33. Division 1 or Airport Operations will forward the lists to the Fire Marshal's Office for follow-up with the water department to ensure the repairs are completed.

8.34. Private Hydrants

8.34.1. Private hydrants are to be inspected in the same manner as city hydrants, with the only exception being that the body of the hydrant should be painted red while painting the bonnet color-coded to the main. If the main size is unknown the bonnet should be painted red also.

8.34.2. When inspecting private hydrants, notify the management or owner that the hydrants are being tested. Report any deficiencies or out-of-service hydrants to the management or owner, using a Private Hydrant Report (17-32-B). Submit a copy of the 17-32B to the management or owner and submit an additional copy to the office of the Fire Marshall. The Battalion Chief shall maintain a working list

of hydrants out-of-service or in need of repair for a follow-up inspection to ensure compliance. A follow-up inspection shall be conducted five (5) working days after the initial inspection. If repairs have not been completed within the five- (5) day period, the Battalion Chief shall notify the Fire Marshall, in writing.

8.34.3. All private hydrant systems shall be flow tested once a year, during the fall tour or when there is concerns of the system having adequate water delivery.

8.34.4 Flow testing is to be conducted in the following manner:

8.24.4.1. Attach one squirrel tail from the pump to the hydrant and open the hydrant and pump intake fully. Check and record the static pressure on the compound gauge.

8.24.4.2. Flow water from one discharge fully opened and record the residual pressure on the compound gauge.

If residual pressure falls below 20 psi, report the hydrant out of service, as prescribed in section

8.17.2. Follow-ups must be adhered to if we are to maintain adequate fire

8.35. Vacant / Abandoned Buildings

8.35.1. Dispatchers will have the responsibility to announce all vacant / abandoned buildings that have been placed on the CAD system to units that are responding to the identified location.

8.35.2. As units are conducting fire hydrant inspections, the Company Officer / OIC's will have the responsibility to identify vacant / abandoned buildings and forward the information to Resource Management.

8.35.3. All Company Officers / OIC's will complete the vacant / abandoned building form and forward the completed document to each respective Battalion Chief

8.35.4. All Battalion Chiefs will ensure that the company's identify the vacant / abandoned buildings during each time they conduct hydrant inspection.

8.35.5 All Battalion Chiefs will collect the identified vacant / abandoned buildings and forward the information to Division 1

8.35.6. Division 1 will take the identified vacant / abandoned buildings and forward them to Resource Management

8.35.7   Resource Management will be responsible for placing the completed information into the CAD system.

8.35.8   Resource Management will be responsible for identifying future applications that may assist with identification of vacant / abandoned buildings to facilitate rapid data transfers between Communications and units responding.

8.35.9.   Support Services will be responsible for coordinating with other City departments, so that all identified vacant / abandoned buildings are properly identified and placed on the Building Department's database for tracking and historical retrieval.

8.35.10   During hydrant inspections, Company Officers / OIC's will verify that previous identified vacant / abandoned buildings still fall within the definition or have become occupied and need to be removed from the active register.