



DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LT. GOVERNOR

MARY ELIZABETH HEFFERNAN
SECRETARY

The Commonwealth of Massachusetts
Executive Office of Public Safety and Security
Fire Safety Commission

Automatic Sprinkler Appeals Board

P.O. Box 1025 ~ State Road

Stow, Massachusetts 01775

(978) 567-3181 Fax:(978) 567-3121

JOHN J. MAHAN
CHAIRMAN

MAURICE M. PILETTE
VICE CHAIRMAN

Docket # 2010-17
737 Court Street
Brockton, Massachusetts

AUTOMATIC SPRINKLER APPEALS BOARD DECISION

A) Statutory and Regulatory Framework

This is an administrative appeal held in accordance with Massachusetts General Laws Chapter 30A, Chapter 148, § 26G, and Chapter 6, s. 201, relative to a decision of the Brockton Fire Department, ordering the installation of automatic sprinklers in a proposed addition and throughout a building complex located at Cardinal Spellman High School, 737 Court Street, Brockton, Massachusetts (hereinafter referred to as the Appellant).

B) Procedural History

By written notice received by the Appellant on November 8, 2010, the Brockton Fire Department issued a determination to the Appellant requiring automatic sprinklers to be installed in an addition, which the Appellant is proposing to construct, as well as in all other portions of a building complex located at 737 Court Street, Brockton, MA. The determination was issued pursuant to the provisions of M.G.L. c. 148 § 26G. On November 24, 2010, the Appellant filed an appeal of the determination with the Automatic Sprinkler Appeals Board. The Board held a hearing on December 8, 2010, at the Department of Fire Services, Stow, Massachusetts. The hearing was continued for further documentation.

The Board held a second hearing relative to this appeal on February 8, 2011, at the Department of Fire Services, Stow, Massachusetts. Appearing on behalf of the Appellant was Rocky Edwards of Consentini Consulting Engineers and James S. Jordan, Architect, of AI3 Architects. Appearing on behalf of the Brockton Fire Department was Lt. Edward Williams.

Present for the Board were: John Mahan, Chairman; Maurice M. Pilette, Vice Chairman; Frank Kodzis; Alexander MacLeod; Thomas Coulombe; Peter Gibbons; and Aime DeNault. Peter A. Senopoulos, Esquire, was the Attorney for the Board.

C) Issue(s) to be Decided

Whether the Board should affirm, reverse or modify the determination of the Brockton Fire Department requiring sprinklers in the Appellant's proposed addition and in all other related buildings or structures, in accordance with the provisions of M.G.L. c.148 § 26G?

D) Evidence Received

1. Application for Appeal filed by Appellant
2. Correspondence re: Representation of Appellant by Cosentini Consulting Engineers
3. Statement and Photographs in support of Appeal and Letter from Professional Engineer
4. Order of Notice issued by the Brockton Fire Department
5. Plans of Cardinal Spellman High School
 - 5A. Overall Lower Level Floor Plan
 - 5B. Overall First Floor Plan
 - 5C. Overall Second Floor Plan
 - 5D. Overall Third Floor Plan
 - 5E. Overall View
 - 5F. Plan of New Addition
6. Notice of Hearing to the Appellant
7. Notice of Hearing to the Brockton Fire Department
8. Copies of two Memoranda that accompany Hearing Notices
9. Correspondence to the Parties from the Board re: additional information needed
10. Supplemental Information from the Appellant
11. Supplemental Information from the Brockton Fire Department
12. Notice of Hearing to the Parties of rescheduled hearing

E) Subsidiary Findings of Fact

- 1) By written notice received by the Appellant on November 8, 2010, the Brockton Fire Department issued a determination to the Appellant, requiring automatic sprinklers to be installed in an addition, which the Appellant is proposing to construct. The notice also required such sprinklers to be installed throughout all other portions of a building complex located at 737 Court Street, Brockton, MA. The determination was issued pursuant to the provisions of M.G.L. c. 148 § 26G. On November 24, 2010, the Appellant filed an appeal of the decision with the Automatic Sprinkler Appeals Board. The Board held a hearing on December 8, 2010, at the Department of Fire Services, Stow, Massachusetts. The hearing was continued. A second hearing was held on February 8, 2011 at the Department of Fire Services.
- 2) The determination of the Brockton Fire Department was issued as a result of the Appellant's plan to build an addition of approximately 4,303 s.f., to that portion of a building complex used as a gymnasium. The gymnasium, including the basement, 1st floor, and mezzanine levels, currently consists of approximately 18,018 square feet. The Appellant indicated that it

is going to install an adequate system of sprinklers throughout all areas of the existing gymnasium and the planned fitness center addition.

- 3) The existing school building and pedestrian tunnel currently do not feature sprinklers.
- 4) In addition to the gymnasium building, the complex also consists of a school building. The school building is connected to the existing gymnasium by means of an underground pedestrian tunnel. The complex also features a covered pedestrian crosswalk that is approximately 60' feet in length located between the existing buildings. Said existing school building consists of approximately 102,780 square feet of floor area. The tunnel, which is constructed of concrete, measures approximately 60 ft. long and 10 ft. wide and consists of approximately 679 square feet. It features a gypsum ceiling and doors at each end of the tunnel to close it off. The Appellant believes that because the doors to the tunnel are within the exterior walls, the doors should be considered exterior and therefore, each building is separate and distinct. The Appellant believes that the exterior walls and openings at each end of the tunnel that interface with each building are firewalls.
- 5) It was the Appellant's position that the construction of a 4,303 square foot addition to the gymnasium of the complex should only trigger the installation of sprinklers throughout the gymnasium portion and not throughout the entire building complex. The Appellant's argued that the school portion of said complex is a separate "building" as that word is used in M.G.L. c. 148, s. 26G, as amended by c. 508 of the Acts of 2008.
- 6) The Appellant provided evidence and testimony that certain provisions of the State Building Code (780 CMR) would allow for an educational building in excess of 12,000 sq. ft. to be exempted from sprinklering. Furthermore, Appellant indicated that the State Building Code, under certain circumstances involving new construction, considers a pedestrian connector between two buildings, to be separate and not part of any building for sprinkler installation purposes.
- 7) The representative of the Brockton Fire Department testified that the Department's determination to install a sprinkler system under M.G.L. c. 148, s. 26G was based upon the existence of the pedestrian tunnel and the connection between the school building and gymnasium. The Fire Department believes that the areas of the pedestrian tunnel are part of one large building requiring sprinklers throughout.
- 8) The Appellant requested that if the Board was to order sprinklers to be installed throughout all the buildings, including the main school building, that a reasonable extension of time be granted to complete the work due to the great extent and cost of installation throughout the school complex. Such an extension would be necessary to acquire necessary financing, design the new sprinkler systems for submission and approval of the Fire Department, and to complete actual installation. The Appellant suggested a 5-year period of time to complete the installation of a sprinkler system throughout. The representatives of the Fire Department indicated that such a request was reasonable and supported Appellant's request for an extension based upon the circumstances presented.

F) Ultimate Findings of Fact and Conclusions of Law

- 1) The provisions of M.G.L. c. 148, s. 26G, states, (in pertinent part): “Every building or structure, including *any additions* or major alterations thereto, which totals, in the aggregate, more than 7,500 gross square feet in floor area shall be protected *throughout* with an adequate system of automatic sprinklers in accordance with the provisions of the state building code.”
The stated provisions of this statute reflect recent amendments in Chapter 508 of the Acts and Resolves of 2008.
- 2) In most instances involving additions to an existing building, the floor plan and building dimensions, as completed, are clearly delineated and obvious. However, if the addition is connected to an existing structure, which is also connected to one or more existing structures, the determination of whether all the connected structures should be considered one building for the purposes of enhanced sprinkler protection is not so clear. In such cases, the Board will review the details and characteristics of the structure or connected structures, in light of the enhanced fire safety intent of s. 26G and common sense.
- 3) The determination of whether a building or structure, or a complex or set of buildings or structures should be considered “one” building for the purposes of s. 26G sprinkler protection, is dependant on many factors. Such factures include, but are not limited to: plot and property boundary lines; building ownership and control; building configuration and location and nature of exterior walls and fire walls; the characteristics, dimensions and combustible fire load of the point of “connection” of buildings or structures; the operational relationship between structures, such as legal occupant load, use group classification, shared utilities, facilities and restroom access; the nature and extent of existing fire protection and detection systems and the nature of smoke and fire behavior.
- 4) The Appellant indicated that the Massachusetts State Building Code, in 780 CMR section 3104, considers, as separate, two structures that are connected by means of a pedestrian walkway or tunnel as long as certain criteria are met. Said code also indicates that such a walkway does not contribute to the building area or the number of stories or height of connected buildings. Although not bound by the provisions of the State Building Code, since the s.26G enhanced requirements are separate and distinct from such code, this Board may nevertheless look to such referenced standards for guidance.
- 5) The statute states that for the purposes of this law, “the gross square footage of **a building or structure** shall include the sum total of the combined floor areas for all floor levels, basements, sub-basements and additions, in the aggregate, **measured from the outside walls**, irrespective of the existence of interior fire resistive walls, floors and ceilings” (emphasis added). This language is quite specific in defining what dimensions and areas of a building are used to calculate the gross square footage to determine if sprinklers are required. Although the specified area used to calculate the gross square footage of a building may be broad, the Legislature makes a distinction between interior “fire resistive” walls and “outside walls”. It is clear that a building should be measured and, in most cases, defined by the limits of outside or exterior walls.

- 6) Clearly, the 60’ foot long covered outside pedestrian crosswalk used by pedestrians to travel across a roadway in this case is not the type of structure that is used to calculate the gross square footage of either of the structures it connects. It has no exterior walls, is open to weather, has no occupant load and traverses a roadway.
- 7) With respect to the two structures connected by the underground tunnel, the Board finds based upon the characteristics presented at the hearing, that each structure should be considered a separate building for the purposes of s. 26G. Each building is clearly defined and separated by separate and independent outside masonry walls. The length of the tunnel, its below level grade, the existence of firewalls and fire doors at each end of the tunnel, limited wall area at the points of interface with the two structures and the existence of no obstructions or combustible materials within the tunnel were also factors in this case.

G) Decision and Order

Based upon the evidence and testimony presented at the hearing, the Board **modifies** the determination of the Brockton Fire Department. The Board finds that an adequate system of automatic sprinklers shall be installed throughout the planned addition to the gymnasium building and throughout all areas of the gymnasium building as required by the Brockton Order. Sprinklers are not required to be installed in the main school building on the condition that:

- (1) The existing exterior walls at each end of the tunnel that interface with each building meet the appropriate standards for a masonry firewall, including appropriate doorways that feature automatic closure in the event of a fire, all as approved by the Head of the Fire Department;
- (2) Said exterior “firewalls” and approved doorways shall be continuously maintained in accordance with said approval by the Head of the Fire Department; and
- (3) The areas within the tunnel, at no time, shall contain any combustible materials.

H) Vote of the Board

| | |
|-----------------------------------|----------|
| John Mahan, Chairman | In Favor |
| Maurice Pilette, Vice Chair | In Favor |
| Frank Kodzis, Boston Fire Marshal | In Favor |
| Thomas Coulombe | Opposed |
| Alexander MacLeod | In Favor |
| Peter Gibbons | Opposed |
| Aime DeNault | In Favor |

REMAINDER OF PAGE LEFT BLANK INTENTIONALLY

D) Right of Appeal

You are hereby advised you have the right, pursuant to section 14 of chapter 30A of the General Laws, to appeal this decision, in whole or in part, within thirty (30) days from the date of receipt of this order.

SO ORDERED,



John Mahan, Chairman

Dated: March 17, 2011

A COPY OF THIS DECISION AND ORDER WAS FORWARDED BY CERTIFIED MAIL, RETURN RECEIPT REQUESTED TO:

Rockwood J. Edwards, P.E.
Consulting Engineers
Building 200, 2nd Floor
One Kendall Square, Suite B 2204
Cambridge, Massachusetts 002139-1571

Lt. Edward Williams
Brockton Fire Department
560 West Street
Brockton, Massachusetts 02301