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The Commonwealth of Massachusetts
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Fire Prevention Regulations Appeals Board
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LARRY S. FISHER
CHAIRMAN

Docket # 2024-06
5 Datewood Street
Wareham, Massachusetts

FIRE PREVENTION REGULATIONS APPEALS BOARD DECISION

A) Statutory and Regulatory Framework

This matter is an administrative appeal filed in accordance with Massachusetts General Laws Chapter 22D, section 5. The Appellant is seeking the Board of Fire Prevention Regulations' review of an Order of Notice of the Wareham Fire Department regarding a solar panel array installation on a residential, single-family home located at 5 Datewood Street, Wareham, Massachusetts. The appeal was filed by Brett Duguay of BD Electrical Services & Construction, LLC on behalf of the homeowners, John and Jane Donohue (hereinafter referred to as the Appellants).

B) Procedural History

By notice dated November 21, 2024 and issued by the Wareham Fire Department, the Department found that a solar panel array installed on a residential, single-family home at 5 Datewood Street, Wareham, failed to comply with 527 CMR 1.00, Chapter 11, specifically 11.12.3.2.3.3 and 11.12.3.2.4.2.

On November 26, 2024, the Appellant filed a timely appeal of the Wareham Fire Department's determination with the Fire Prevention Regulations Appeals Board. The Board held a hearing relative to this appeal on January 16, 2025, via video conference.

Appearing on behalf of the Appellant were: Brett Duguay of BD Electrical Services & Construction, LLC and John and Jane Donohue, homeowners. Appearing on behalf of the Wareham Fire Department was Captain Chris Smith and Captain Chris Callinan. Present for the Board were: Chief Richard Arruda, Presiding Chair; Larry S. Fisher; Paul Kennedy, Jr. and Patricia Sheehan, Alternate. Rachel E. Perlman was the Attorney for the Board.

C) Issue(s) to be Decided

Whether the Board should affirm, reverse or modify the determination of the Wareham Fire Department regarding the solar panel array installation in accordance with 527 CMR 1.00, Chapter 11?

D) Evidence Received

1. Application for Appeal filed by Appellant (dated 11/26/2024)
2. Statement in Support of Appeal and explanation of project (dated 11/22/2024)
- 2-1. Construction Drawings with Engineered Stamp
- 2-2. Field Verified Roof Measurements
- 2-3. Conditional Approval from the Wareham Fire Dept. Fire Prevention Team
- 2-4. Installation Photos: Overview of Home, Fire Pathway 1, Fire Pathway 2, Ridge Setback 1, Ridge Setback 2 (5 total photographs)
- 2-5. Order of Notice issued to Appellant from the Wareham Fire Department (dated 11/21/2024)

E) Subsidiary Findings of Fact

1. The Appellant sought this Board's review of the Wareham Fire Department's Order of Notice to comply with 527 CMR 1.00, Chapter 11, specifically 11.12.3.2.3.3 and 11.12.3.2.4.2 for a solar panel installation at 5 Datewood Street, Wareham, Massachusetts. The appeal was filed pursuant to the provisions of M.G.L. c. 22D, s. 5.
2. At the hearing, the Appellant testified that the solar panels were installed on the front and back roof planes of a residential single-family home, as well as a detached shed. The installation on the home consists of 19 solar panels (10 on the front and 9 on the back), with each panel measuring 68" x. 47.5" in size, in addition to an energy storage unit on the outside of the subject property.
3. Mr. Duguay, the solar panel installer, testified that the solar panel project was initiated in September 2024 by the homeowners. He stated that the initial construction plans detailing the solar installation and fire access pathway setbacks were submitted to the Wareham Fire Department for their review and approval in October 2024. He stated the initial application was denied, pending additional information to be submitted to the Wareham Fire Department regarding access pathways and fire setbacks.
4. Mr. Duguay testified that he supplemented his application with the requested information, including revised professionally stamped plans to clarify roof area calculations, address pathway requirements, and ensure compliance with fire safety requirements. He testified that the plans were then "conditionally" approved for the installation on October 7, 2024 and the panels were installed on October 21-22, 2024¹.
5. According to Mr. Duguay, once the solar panel array had been installed, the Wareham Fire Department came for final inspection on October 28, 2024 and denied (failed) the inspection citing failures to comply with 527 CMR 1.00, sections 11.12.3.2.3.3 (access pathways) and 11.12.3.2.4.2 (setbacks at the ridge).
6. The Order of Notice submitted into the record, indicated that the Wareham Fire Department found "there is only one single access pathway provided for one of the arrays" and that "the PV array occupies greater than 33 percent of the plan view roof area therefore the setbacks at the ridge shall be a minimum of 36 in." Mr. Duguay argued that the solar array on the front of the home has two access pathways from the gutter to ridge, on both sides of the panels. He further argued that the solar panels only occupy 32.4% of

¹ The Board notes that the application plans were not submitted into the record.

the roof area, which is less than the 33% triggering requirement for the increased setbacks on the horizontal ridge.

7. Mr. Duguay testified that “plan view roof area” means birds eye view of the roof, which is viewed directly from above as a flat two-dimensional surface. However, he believes that such a view does not account for the roof pitch and “physical reality” of the roof’s geometry, and which may have skewed the Wareham Fire Department’s calculation of the total array area on the roof.
8. Mr. Duguay argued that given the evolving nature of fire safety regulations, particularly for solar installations, it is reasonable to expect the AHJ to provide clear guidance on uncertainties such as roof setbacks and pathways. In this instance, he argued that the Wareham Fire Department failed to properly advise him during the planning and review process, which has led to a delay in this project and potentially added costs to the homeowner for changes to the installation that may be required by the Board.
9. Mr. Duguay and Mrs. Donohue both testified that per the code, the Authority Having Jurisdiction (AHJ) has the ability to reduce or modify roof access based upon fire department ventilation procedures. In this instance, Mr. Duguay stated that following the inspection denial, he requested that the Chief of the Wareham Fire Department grant such a waiver on the access requirements and the request was denied. This was confirmed by Captain Smith.
10. In support of the Wareham Fire Department’s Order of Notice, Captain Christopher Smith testified that the department did not grant conditional approval of the submitted plans on October 7th, contrary to the testimony of Mr. Duguay. Captain Smith stated that the comments in the permitting system were merely advising Mr. Duguay on how the department expected the solar array to be installed upon inspection.
11. During the inspection conducted by Captain Callinan on October 28, 2024, he noted that there was no access pathway to the rear side of the house, only to the street side. Further, Captain Callinan noted that the total square footage of the solar array exceeded the 33% code requirement and would require a 36-inch setback at the roof at the ridgeline, while the project only had 18 inches.
12. Captain Smith testified that he tried to work with both Mr. Duguay and the Appellants and discussed a potential variance with the Chief. However, the Chief denied the request.
13. Captain Callinan stated that while he understands the concerns raised by Mr. Duguay regarding how solar array coverage is calculated through “plan view roof area”, the code is clear and the department can’t deviate from the requirements of code.

F) Ultimate Findings of Fact and Conclusions of Law

1. The applicable sections of 527 CMR 1.00, Chapter 11 to the subject property are as follows:

11.12.3.2.3.3 For each roof plane with a PV array, a 36 in. (914 mm) wide access pathway from gutter to ridge shall be provided on the same roof plane as

the PV array, on an adjacent roof plan, or straddling the same and adjacent roof planes.

11.12.3.2.4.2 For PV arrays occupying more than 33 percent of the plan view roof area, a minimum of 36 in. (914 mm) setback shall be provided on either side of a horizontal ridge.

2. The Board finds that the plan, as submitted by the Appellant (Exhibit 2-1), meets the requirements of 11.2.3.2.3.3. More specifically, there are two 36 in. access pathways which are located on the front of the home, on both the left and right of the solar panels, from gutter to ridge. Those access pathways are located on the same roof planes to those containing PV arrays.
3. Based upon testimony received during the hearing, the Board finds that the calculations used by the Appellants for the PV array area was not the “plan view area,” as required by the 11.12.3.2.4.2. The Board further found that the PV array was calculated at more than 33% of the plan view roof area and therefore a 36 in. setback on either side of the horizontal ridge is required.
4. The Board finds that while the AHJ has the authority in 11.12.3.1.2 to reduce or modify roof access based upon fire department ventilation procedures or alternative methods to ensure access, that the Wareham Fire Department did not present any evidence that department ventilation procedures or alternative methods warranted a modification.

G) Decision and Order

Based upon the forgoing reasons, this Board **modifies** the Order of the Wareham Fire Department as follows:

1. This Board **reverses** the order to comply with 527 CMR 11.12.3.2.3.3, as it pertains to the requirement for additional access pathways.
2. The Board however **upholds** the order to comply with 527 CMR 11.12.3.2.4.2 regarding the roof ridge setback, which shall be a minimum of 36 inches on either side of a horizontal ridge.

H) Vote of the Board

Chief Richard K. Arruda, Presiding Panel Member	In Favor
Larry S. Fisher	In Favor
Paul Kennedy, Jr.	In Favor

I) 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,



Chief Richard K. Arruda, Presiding Panel Member
Fire Prevention Regulations Appeals Board

Dated: January 30, 2025

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

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