

VERMONT ENVIRONMENTAL BOARD
10 V.S.A. Chapter 151

RE: Okemo Mountain, Inc. by Findings of Fact and
Thomas Salmon, Esq. Conclusions of Law
P.O. Box 535 and Order
Bellows Falls, VT 05101 Land Use Permit
#2S0351-10-EB (Revised)

This decision pertains to an appeal filed with the Environmental Board on September 2, 1988 by Michael Fassler and Robert Rossini from the Land Use Permit, Findings of Fact, Conclusions of Law and Order #2S0351-10 issued by District #2 Environmental Commission on August 5, 1988. The permit authorized Okemo Mountain, Inc. to create an eight-lot subdivision and 800 feet of road in the Town of Ludlow, Vermont.

The hearing was opened on October 4, 1988, and on November 16, 1988 a public hearing was convened in Ludlow before an administrative hearing panel of the Board, pursuant to Board Rule 41 and 3 V.S.A. § 811. The following persons participated in the hearing:

Michael Fassler and Robert Rossini (Appellants) by
John D. Hansen, Esq.
Okemo Mountain, Inc. (Applicant) by Lawrence G. Slason,
Esq.

An overview of the project was presented by the Applicant, after which the panel recessed the hearing, visited the site with the parties, and returned to the hearing. Following the conclusion of the testimony of the parties, the panel recessed the hearing on November 16, 1988, pending the filing of proposed findings and memoranda by the parties, a review of the record, and preparation of a proposed decision by the hearing panel. On December 12, 1988, the Applicant filed proposed Findings of Fact, Conclusions of Law and Order. A proposed decision was sent to the parties on April 3, 1989 and the parties were provided an opportunity to file written objections and to present oral argument before the full Board.

On April 14, 1989, the Appellants and the Applicant filed written responses to the proposed decision, and the Applicant also filed a motion to reopen the hearing to allow the Applicant to present additional evidence in connection with sight distances at the intersection of West Village

Road and the access road to the subdivision./1/ After considering the Applicant's arguments and the Appellants' objections, on May 4 the Board agreed to reopen the hearing. The hearing panel reconvened on September 13, 1989 and recessed pending preparation of a proposed decision. On September 27, the Applicant filed proposed findings and a legal memorandum. A proposed decision was sent to the parties on January 3, 1990 and the parties were provided an opportunity to file objections and present oral argument.

On January 10, 1990, the Applicant filed a response to the proposed decision. On January 17, the Board convened a public hearing in Montpelier and heard oral argument from the parties. On January 24, the Applicant filed a post-argument memorandum and on January 26 the Appellants filed an objection to and motion to strike the Applicant's memorandum. On January 31, the Applicant filed a response to the Appellants' objection and motion to strike. On March 7, the Board reviewed the proposed decision, the evidence presented in the case and the written objections, legal memoranda and oral arguments of the parties.

On May 24, the Board conducted a further deliberation and on July 11, 1990, a final decision was issued. The Appellants filed a Motion to Strike, Motion to Vacate and Motion for other Appropriate Relief on July 26. On October 31, the Board issued a Memorandum of Decision denying the Appellants' motions. On November 15, the Appellants filed objections and a Motion to Reconsider. The Board deliberated on January 9, 1991, and decided to reconsider and issue a revised decision. This case is now ready for decision. The following findings of fact and conclusions of law are based exclusively upon the evidence entered into the record and the observations made at the site visit which were discussed at the hearings. To the extent the Board agreed with and found necessary any findings proposed by the parties, they have been incorporated herein; otherwise, said requests to find are hereby denied.

/1/The Applicant's argument is explained on page 4, below.

I. ISSUES IN THE APPEAL

A. Party Status

Appellants Fassler and Rossini requested party status with respect to Criterion 5. Mr. Fassler's property adjoins Lot 39 to the east of the Snowbridge subdivision access road (hereafter referred to as the Snowbridge road) and he owns water rights in a well located on Lot 39 between his property and the Snowbridge road. The Chairman granted Mr. Fassler party status pursuant to Rule 14(B). Mr. Rossini's property is located west of the Snowbridge road on West Village Road. He must travel through the intersection of West Village Road and the Snowbridge road to and from his residence and believes it is unsafe. The Chairman determined to wait until after hearing the evidence to decide whether to grant Mr. Rossini party status. Since Mr. Rossini travels through the intersection and the evidence demonstrates that the intersection presents an unsafe condition for drivers passing through the intersection, the Board grants Mr. Rossini party status pursuant to Rule 14(B) (I).

The Applicant asks the Board to reconsider the granting of party status to Robert Rossini, contending that Mr. Rossini is not affected differently from any other persons who must travel through the intersection of West Village Road and the Snowbridge road. We note, however, that Rule 14(B) (1), which authorizes the Board to grant party status to an individual who demonstrates "[t]hat a proposed development or subdivision may affect his interest under any of the provisions of section 6086(a). . ., does not require a showing that one's interest is affected differently from other people's. Mr. Rossini has demonstrated to the Board's satisfaction that his interests may be affected by unsafe conditions at the intersection because he must travel through the intersection to and from his residence. The requirement of the rule is therefore satisfied and the Board may grant him party status. We therefore decline to alter our decision.

B. Substantive Issues

The proposed eight-lot subdivision (Phase II) will be located further up the Snowbridge road from the previously-approved seven-lot Snowbridge subdivision (Phase I). The additional 800 feet of road will be an extension of the 1,200 feet of road approved in Land Use Permits #2S0351-8

and #2S0351-8-EB (Reconsideration). The District Commission required that Phase II of the road be built to A-76 Standards for road width and depth of gravel. The Appellants believe the District Commission should have imposed a similar requirement for the Phase I portion of the road because all the traffic from both Phase I and Phase II will use that part of the road. The Appellants claim that the narrowness of the first section of the road and inadequate sight distances at the intersection of the Snowbridge road with West Village Road create unsafe conditions. The Appellants believe that sight distances need to be increased, the Snowbridge road needs to be widened, and a ditch needs to be dug on the east side of the Snowbridge road to divert runoff from the well, as required by Land Use Permits #2S0351-8 and #2S0351-8-EB.

The Applicant believes that the Snowbridge road is not too narrow to safely accommodate traffic, the sight distances are adequate, and a ditch on the east side of the road is not necessary because the well is protected by a 12" to 18" high raised berm that directs runoff along the side of the road and away from the well.

In seeking reopening of the hearing, the Applicant argued that rather than base the sight distance requirements on standards for corner sight distances recommended in the 1984 AASHTO manual, the Board should consider actual site specific information relating to roadway geometry, physics, and vehicular movement under various road conditions. Accordingly, at the reconvened hearing, the Applicant presented the results of a study of actual driving conditions at the intersection of West Village Road and the Snowbridge road in an attempt to demonstrate that the standards in the manual published by the American Association of State Highway and Transportation Officials (AASHTO) guidelines are not applicable to this intersection given the actual maximum speed that can be achieved.

The Appellants maintain that the AASHTO guidelines for corner sight distances should be applied because they are based on a detailed review of numerous studies of perception, decision, and reaction times of many different drivers under various highway conditions.

The Board must decide the following issues:

- a) Whether the sight distances at the intersection of West Village Road and the Snowbridge road are adequate and, if not, what the minimum safe sight distances are.
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- b) Whether the Snowbridge road should be widened to 24 feet for its entire length.
- c) Whether a ditch needs to be dug on the east side of the Snowbridge road to divert runoff away from the well on the property of Appellant Fassler.
- d) Whether the Snowbridge road creates unsafe conditions for pedestrians.

II. FINDINGS OF FACT

1. The Applicant has proposed constructing an eight-lot subdivision consisting of single-family homes known as Phase II of the Snowbridge subdivision. Access to the subdivision will be gained from a new 800-foot road (Phase II Road) which is an extension of the 1,200-foot road (Phase I Road) previously approved as part of Phase I of the Snowbridge subdivision that consists of seven lots with single family homes. The road is known as the Snowbridge road.
 2. All traffic from Phase II will have to use the Phase I part of the Snowbridge road. The additional houses in Phase II will cause an increase in traffic on the Snowbridge road from approximately 50 vehicle trips per day to 100 vehicle trips per day.
 3. The Phase II Road will have a travel width of 24 feet with a 15-inch gravel subbase. There will be a turn-around at the end of the road with a 50-foot radius. The grade of the road will not exceed 12 percent.
 4. The Snowbridge road intersects at its southern end with Town Highway #21, also known as West Village Road. West Village Road is an unpaved, Class III town road.
 5. On the west side of the Snowbridge road is a vacation house owned by Okemo on so-called Lot 39 of the West Village subdivision. The house is situated approximately 10 feet from the edge of the Snowbridge road. The main entrance to the house on Lot 39 is on the side that faces away from the Snowbridge road.
 6. A timber post guardrail is located along both sides of the Snowbridge road. The purpose of the guardrail is to minimize conflict between pedestrians and vehicles, in
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accordance with the findings and conclusions attached to Land Use Permit #2S0351-EB.

7. Land Use Permit #2S0351-8-EB (Reconsideration) contains the following finding with respect to Criterion 5, in pertinent part:

3. [G]uardrails will be installed on both sides of the access road as specified in Board Exhibit #10 to ensure that vehicles remain in the designated roadway and that conflicts between the buildings, pedestrians, and skiers are minimized.

- a. The Findings of Fact and Conclusions of Law attached to the Board's permit for Phase I (#2S0351-8-EB (Reconsideration)) contain the following conclusions regarding traffic safety:

Traffic safety problems have been resolved because it is now clear that the potential for conflict between pedestrians in the vicinity of the house on Lot #39 and the cars on the road will be minimized by the installation of the guardrails, the relocation of the building entrance away from the road, and the relocation of the driveway and parking lot for the house. The Board's earlier requirement that the road must be located at least 15 feet from the house is no longer necessary because all of the changes proposed when considered together adequately address the traffic safety concerns which led to the imposition of this requirement.

(Emphasis added.)

9. At the time of the first hearing, the guardrail had a break in it at the house on Lot 39 which allowed pedestrians to gain access to the road from Lot 39.
 10. Land Use Permit #2W0351-8-EB includes a condition that requires that the Phase I Road be constructed in accordance with Board Exhibit #10. That exhibit represents the road as 24 feet wide for most of its
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length, narrowing to 22 feet wide from the area of Lot 39 to its end at West Village Road. Approval for the road was granted based upon the Applicant's representation that the road width would be as shown on the site plan.

11. At the time of the first hearing, the width of the Phase I road varied along its 800-foot length. It was approximately 17 feet wide near its intersection with West Village Road as it curves around the house on Lot 39. The road then widened to 19 feet and up to 23 feet in some sections. Along the curve leading over the snowbridge, the road width varied between 20 and 22 feet between the timber rails. In order to negotiate the curve, vehicles tend to drive in the center of the road through the curve. The snowbanks created when the snow is plowed against the guardrails further narrow the road in the winter months. All traffic from both phases of the Snowbridge subdivision must use the lower, narrow part of the subdivision road where it curves around the house on Lot 39.
 12. The Vermont Agency of Transportation's A-21 Standards for low volume roads specify that road width requirements increase from 20 feet to 24 feet when the number of vehicle trips per day increases above 50. The increased width is needed to accommodate safely the greater number of opposite-direction vehicle passings that occur with more traffic.
 13. On the south side of West Village Road across from the Snowbridge road is a house owned by Mr. Flaherty. Mr. Flaherty customarily parks cars on the road next to his property. Since construction of the Snowbridge access road, other cars park along West Village Road near the intersection of the Snowbridge road and skiers walk along the Snowbridge road to get to the ski slopes rather than use the Okemo ski area parking lot. People from nearby vacation homes in the West Village road area also use the Snowbridge road to get to the ski slopes.
 14. West Village Road curves uphill as it approaches the Snowbridge road from the east; the Snowbridge road is located at the crest of the hill. A more prominent side road is located on the West Village Road approximately 80 feet below and on the opposite side from the Snowbridge road intersection. This side road
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may divert the attention of motorists traveling up West Village Road away from the Snowbridge road. Drivers are actually facing the side road and may not even be looking toward the Snowbridge road as they approach it.

15. When the West Village Road is covered with snow or ice, vehicles may need to accelerate to get up the hill.
 16. There are approximately 43 houses in the area of the West Village Road near the Snowbridge subdivision. Vehicles going to and leaving these houses must pass through the intersection of West Village Road and the Snowbridge road. Most, if not all, of these houses are vacation homes used most heavily during the winter ski season. Many of the users are from out of state and may not be familiar with the roads or used to driving in snowy or icy conditions.
 17. The 1984 Manual published by the American Association of State Highway and Transportation Officials (AASHTO) contains guidelines for highway designs to achieve safe sight distances. Sight distances are calculated for either safe stopping distance or corner intersection sight distance. The safe stopping distance is intended to be applied to a continuous section of road where a motorist may come upon a stationary object to ensure that the motorist is able to observe the object and brake to a stop before hitting it. The intersection, or corner, sight distance is the distance needed for a driver to see to the left and the right before pulling out of a side road to avoid getting hit by a car traveling on the main road, and the distance needed by a driver of a vehicle traveling on the main road to see a vehicle exiting from a side road in order not to have to slow down to avoid an encounter with that vehicle.
 18. Sight distances are calculated based upon the distance traveled during perception, decision, reaction, and stopping (or avoidance maneuver) once an object is perceived.
 19. The intersection sight distances recommended by AASHTO take into account a number of different conflict situations that occur at intersections based upon numerous studies of perception, decision, and reaction times of drivers under real driving conditions. Relevant variables, such as the acuity of the operator, the distance of the object encountered, atmospheric
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visibility, type and condition of roadways, and vehicle speed, are factored in. AASHTO standards provide for a margin of safety for the average driver under difficult conditions.

20. Regular conflict situations between through and turning vehicles or between vehicles and pedestrians at **intersections** often require more complex and quicker decision-making than is required for coming to a stop when an object is perceived straight ahead. AASHTO therefore requires longer sight distances for visibility at intersections than for continuous sections of road.
 21. The Board finds that the AASHTO recommendations for corner, or intersection, sight distances are the appropriate standards to be applied when evaluating sight distances at this intersection.
 22. The grade of the hill on West Hill Road is approximately 9% to 10%. The AASHTO manual provides adjustments to sight distances to compensate for grades. For a design speed of 30 mph, the required sight distance for an upgrade of 9% is reduced by 20 feet.
 23. According to the 1984 AASHTO manual, safe intersection sight distances are 210 feet when traveling at 20 mph, 310 feet at 30 mph, 360 feet at 35 mph, and 415 feet at 40 mph. At a 10% grade, safe intersection sight distances are 190 feet at 20 mph, 290 feet at 30 mph, 340 feet at 35 mph, and 395 feet at 40 mph. The Board infers that the safe intersection sight distance at 15 mph is approximately 140 feet.
 24. The sight distance for a motorist approaching the intersection of the Snowbridge road traveling downhill on West Village Road is more than 300 feet.
 25. The sight distance for a motorist exiting the Snowbridge road and a motorist approaching the intersection uphill on West Village Road is approximately 150 feet. Maximum sight distance would be 175 feet if existing vegetation were removed. In the wintertime, the sight distances would be reduced by snowbanks; with a four and one-half foot high snowbank, the sight distance would be zero for drivers seeking to turn left onto West Village Road from the Snowbridge road, while a driver traveling up West Village Road could not see a car on the Snowbridge road 15 feet back from the intersection.
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26. There is a correlation between limited sight distances and high accident rates.
27. A portion of Lot 39 is located on the east side of the Snowbridge road. The property adjoining Lot 39 on the east is owned by Michael Fassler. His house is served by a well located on Lot 39 in which he owns a one-third interest. The well is located approximately 28.5 feet from the edge of the Snowbridge road.
28. The District Commission's permit and findings reflect a concern for protecting the Fassler well from contamination from road runoff and salt. Land Use Permit #2S0351-8, which approved Phase I and the first 1,200 feet of Snowbridge road, contains the following findings, in pertinent part:
 - 1(A)(2). Mr. Fassler is particularly concerned with runoff from the project development road to his property. The Commission finds the planned rip-rapped culverts and the construction of drainage ditches on both sides of the road should be adequate to prevent excessive run off onto Mr. Fassler's property.
 - 2-3 (c). The project road and ditches will be located no closer than 25 feet to the Fassler well. The project road will be gravel and no salt will be used. Testimony. The Commission finds the 25 foot isolation distance, the roadside ditches, and the prohibition on use of salt provide adequate protection for the Fassler well.
29. Condition #7 of Land Use Permit #2S0351-8 includes the statement that "[n]o salt shall be used on the road."
30. Land Use Permit #2S0351-8 also contains the following conditions:

This Permit hereby incorporates all of the conditions of the Certification of Compliance #2S0351-8, issued on June 10, 1986 by the Environmental Protection Assistant Regional Engineer, Division of

Protection, Agency of Environmental Conservation in compliance with Vermont State Environmental Protection Rules.

The District Environmental Commission would like to emphasize the following condition of the Certificate of Compliance.

1. The proposed development road to serve the seven-lot subdivision shall be no closer than twenty-five feet (25 feet) to the existing drilled well serving the structure on the parcel N/F Fassler. This distance shall be measured from the edge of the roadside swale or toe of roadfill, whichever is closer to the well. This road shall never be paved without prior written approval from the Vermont Agency of Environmental Conservation. (Emphasis as in original).
 31. Condition #17 of Land Use Permit #2S0351-8 states that "[t]he project road shall have ditches on both sides of the road. ..."
 32. No ditch was constructed on the east side of the road. Okemo has not applied for or obtained an amendment to its permit to authorize eliminating the ditch on the easterly side of the Snowbridge road that was required as a condition of its permit for Phase I.
 33. The ground next to the access road is raised 12 to 18 inches above the road. This berm causes water to run along the road and prevents water from running toward the well. However, snowbanks from winter plowing higher than the berm may allow runoff to run toward the well.
 34. Since the issuance of Land Use Permit #2W0351-8, the Applicant has made several improvements to the well, including grouting the concrete apron in which the wellhead sits and extending the well casing four feet above the recessed ground level at the bottom of the concrete casing, as required by Land Use Permit #2W0351-8-EB.
 35. Salt is mixed with the sand that is applied to the Snowbridge road in the wintertime.
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III. CONCLUSIONS OF LAW

This appeal involves an amendment to an existing permit; the Board therefore may only review the impacts from the additional traffic upon the safety of the Snowbridge road and its intersection with West Village Road. Because the Phase I road will be used by all the traffic generated by the Phase II subdivision, the Board must consider the existing conditions of the Phase I part of the road with respect to traffic safety and congestion. The Board will therefore review the entire Snowbridge road in light of the previous findings and conclusions of both the District Commission and the Board as well as in the context of the new proposal.

The original permit for construction of Phase I of the Snowbridge road required a full traveled way width of 24 feet, except for the length of road between the area of Lot 39 to the intersection with West Village Road. The permit also required guardrails to be located outside of the traveled way and ditching on both sides of the road.

The portions of the Snowbridge road around the curves are of concern from a safety standpoint, especially when the snow pushed against the guardrails by plows narrows the traveled portion of the road. The Board believes that the road must be 24 feet wide for its entire length in order to accommodate safely the approximately 100 vehicle trips per day that will occur after Phase II is constructed. The Vermont Agency of Transportation recommends an increase in road width from 20 feet to 24 feet when the number of trips per day exceeds 50. Therefore, although on the site plan that supported the issuance of the permit for Phase I the road narrowed to approximately 22 feet in the area of Lot 39, the Board believes that to ensure that the road can safely accommodate the additional 50 cars per day to be generated from Phase II of the subdivision, the road must be at least 24 feet wide for its entire length, in accordance with VAOT standards.

With regard to the use of the Snowbridge road by pedestrians on their way to the ski slopes, the Board has heard considerable testimony about the large amount of pedestrian traffic that uses the Snowbridge road to gain access to the ski slopes. We are concerned that there is a high potential for encounters between vehicles and pedestrians on the road. The Board believes that the Applicant created an unsafe situation by providing access to

the ski slopes at this location and using poor planning when siting the house on Lot 39 and constructing the Snowbridge road, and that the Applicant has the responsibility to alleviate the unsafe conditions. The Board will therefore require that the Applicant submit a plan to the District Commission for increasing pedestrian safety along Snowbridge road and receive approval of such a plan prior to the occupancy of any of the houses in Phase II of the subdivision.

Concerning the sight distances at the intersection of West Village Road with the Snowbridge Road, the Board believes that the AASHTO standards for corner sight distances are applicable to this intersection. Accordingly, the additional traffic from the Phase II Snowbridge subdivision would create unsafe conditions with respect to both the Snowbridge road itself and the intersection of that road with West Village Road if the speed limit were more than 15 mph. The Board will therefore require the Applicant to have the speed limit in this area posted at 15 mph, and to be responsible for continually ensuring that vegetation and snowbanks that might interfere with sight distances are removed. To add an extra measure of safety, the Board will also require the installation of signs to warn motorists of the intersection. With the AASHTO sight distance standard met and warning signs, the Board believes the project will not cause undue congestion or unsafe conditions with respect to traffic.

With regard to the requirement in the District Commission's permit for Phase I that a ditch be constructed on both sides of the Snowbridge road, the Board is disturbed to find that no ditch has been constructed on the east side and that the Applicant determined on its own, and without seeking approval from the District Commission, that a ditch is not necessary. In the Findings of Fact attached to Land Use Permit #2S0351-8, the District Commission stated that "the 25 foot isolation distance, the roadside ditches, and the prohibition on use of salt provide adequate protection for the Fassler well," and imposed conditions requiring that the isolation distance be maintained, the ditches be constructed, and no salt be used on the road.

We understand that the prohibition against use of salt on the road may not have been intended to include sand that includes salt, and will therefore clarify the condition to prohibit the use of free salt. However, no justification exists for the Applicant to disregard the requirement for a


ditch on the east side of the Snowbridge road to protect the well. Although evidence was presented to the Board that a ditch on the easterly side of the Snowbridge road may not be necessary, Okemo has not applied for a permit amendment for approval from the District Commission to modify its permit. The Board does **not have** the authority to delete a permit condition issued by the District Commission except in the context of an appeal. Since this appeal relates only to the impacts of Phase II and the requirement for a ditch is not changed by the Phase II application, the Board cannot delete that permit condition in this proceeding. If the Applicant believes a ditch is not necessary on the easterly side of the Snowbridge road, it may apply to the District Commission for an amendment to delete or otherwise modify the condition. Unless such action is taken and the Commission determines that a ditch is not necessary to protect the well, Okemo is bound by the condition. In light of the revelation that salt is mixed with the sand that is applied to the Snowbridge road in the wintertime, the Board believes that the ditch on the easterly side of the road may be even more important to protect the well from contamination and must therefore be constructed as required in the Commission's permit unless an amendment is issued by the Commission modifying that requirement. To ensure a safe water supply to the **Fasslers'** house, the Board will require the Applicant to provide a letter of credit or other financial guarantee in the amount of \$10,000 to cover the cost of a new Well in the event this one becomes contaminated.

IV. ORDER

Land Use Permit Amendment #2S0351-10-EB is issued in accordance with the Findings of Fact and Conclusions of Law contained herein. Jurisdiction over this matter is returned to the District #2 Environmental Commission.

Dated at Montpelier, Vermont this 5 day of February, 1991.

ENVIRONMENTAL BOARD



Leonard U. Wilson, Acting Chairman
Ferdinand Bongartz
Arthur Gibb
Samuel Lloyd
Charles F. Storrow

A:OKEMO (WD1)