

8/10/90

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

RE: Swain Development Corp. by  
Jonathan Brownell, Esq.  
Box 206  
Corinth, VT 05039  
and by  
William W. Schroeder, Esq.  
Downs, Rachlin & Martin  
P.O. Box 190  
Burlington, VT 05402-0190

Findings of Fact,  
Conclusions of Law  
and Order,  
Application  
**#3W0445-2-EB**

and

Philip Mans  
**Slayton Hill**  
Lebanon, NH 03766

This decision pertains to an appeal of a permit amendment issued by the District #3 Environmental Commission for construction of a shopping center consisting of a 21,000 square foot supermarket, 35,700 feet of retail space, 227 parking spaces, and related roadways and utilities. As is explained below, the Environmental Board has concluded that, with conditions, the proposed project complies with 10 V.S.A. § 6086(a)(1)(B) (waste disposal), (1)(C) (water conservation), (1)(E) (streams) and (8) (aesthetics, scenic or natural beauty). The Board has also concluded that the proposed project fails to comply with 10 V.S.A. § 6086(a)(5) (traffic), (9)(K) (impact on public facilities) and (10) (conformance with local or regional plans). In accordance with its conclusions on Criteria 9(K) and 10, the Board denies the application and voids the permit issued by the District Commission.

I. SUMMARY OF PROCEEDINGS

Land Use Permit Amendment #3W0445-2 was issued by the District #3 Environmental Commission on January 16, 1989. The permit amendment authorizes the Applicants to construct a shopping center containing a 21,000 square foot supermarket, 35,700 feet of retail space, 227 parking spaces, one public access and one emergency vehicle access, and related utilities. The proposed project is to be located on Route 4 in Hartland, Vermont.

On February 15, 1989, the Two Rivers-Ottawaquechee Regional Planning Commission (Two Rivers) filed an appeal of the permit amendment with respect to Criteria 1(B), 1(C), 1(E), 5, 8, 9(K), and 10. Also on February 15, the Town of Woodstock filed an appeal. Woodstock appealed the District

430

Commission's denial of party status to that town with respect to Criterion 5 and the District Commission's findings of fact and conclusions of law made pursuant to that criterion. The party status denial resulted from a request by Woodstock for party status pursuant to Rule 14(B).

Former Chairman Leonard U. Wilson convened a prehearing conference in White River Junction on March 10, 1989. On March 27, the Board issued a prehearing conference report and order setting forth the issues in the matter and a schedule for submitting memoranda. During the summer and early fall of 1989, parties filed memoranda on various preliminary issues and the Board issued memoranda of decision on these issues.

The Board convened a public hearing in **Hartland** on November 8, with the following parties participating:

The Applicant by Jonathan Brownell, Esq. and  
William W. Schroeder, Esq.  
Two Rivers by John Hansen, Esq.  
Woodstock by **Dona Cullen**, Esq.  
Upper Valley - Lake Sunapee Regional Council (Upper  
Valley) by Bruce Bender

After hearing testimony, the Board recessed the hearing pending submission of further prefiled testimony and photographs of a model used at the November 8 hearing. Parties had agreed at the November 8 hearing that the Board could accept the photographs in lieu of the actual model. On November 22, the photographs were filed (Exhibits **S8.9A-D**).

The Board convened public hearings on January 10 and 11, 1990, in Quechee, with the same parties participating as on November 8. After hearing testimony, the Board recessed the hearings pending filing of proposed findings of fact and conclusions of law, review of the record, deliberation, and decision.

On January 30, 1990, Woodstock and the Applicants filed proposed findings of fact and conclusions of law. On February 12, Two Rivers filed proposed findings. The Board deliberated on March 7 and June 6 in Montpelier, on July 26 in Waitsfield, and on August 1 in Montpelier. This matter is now ready for decision. To the extent *any* proposed findings of fact and conclusions of law are included below, they are granted; otherwise, they are denied.

## II. ISSUES

The issues before the Board are:

1. Whether, pursuant to Criterion 1(B), the proposed project will meet applicable Health and Environmental Conservation Department regulations **regarding** the disposal of wastes and will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells.

2. Whether the proposed project will meet the requirements of Criterion 1(C) (water conservation).

3. Whether, pursuant to Criterion 1(E), the proposed project will require the development of lands on or adjacent to the bank of a stream, and if so, will, whenever feasible, maintain the natural condition of the stream and will not endanger the health, safety or welfare of the public or of adjoining landowners.

4. Whether, pursuant to Criterion 5, the proposed project will cause unreasonable congestion or unsafe conditions with respect to the use of highways.

5. Whether, pursuant to Criterion 8, the proposed project will have an undue adverse effect on the scenic or natural beauty of the area or aesthetics.

6. Whether, pursuant to Criterion 9(K), the proposed project will unnecessarily or unreasonably endanger the public or quasi-public investment in adjacent highways, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to, adjacent highways.

7. Whether, pursuant to Criterion 10, the project must conform to the Upper Valley-Lake Sunapee regional plan, and if so, whether it conforms to that plan.

8. Whether, pursuant to Criterion 10, the proposed project is in conformance with the Two Rivers-Ottawaquechee regional plan.

In its appeal, Two Rivers raised an additional issue regarding whether the Board should require, as a permit condition, the obtaining of amendments to the permit prior to actual **use or** occupancy of the proposed project. The Board declines to address this issue because it is denying the application for the project.

---

III. FINDINGS OF FACT

Project Description

1. The Applicants propose a shopping center containing a 21,000 square foot supermarket, 16 retail shops, and one **53-seat** restaurant. The proposed project will contain a total of approximately 57,000 square feet of floor area. Built space will be broken up into three buildings; the largest one will contain the proposed supermarket. The project will be located on an 11.9 acre tract off U.S. Route 4 in Hartland, Vermont owned by Philip Mans. Swain Development Corp. plans to purchase the tract from Mr. Mans and will be the developer for the project.
  2. As part of the project, the Applicants propose to construct a total of 227 parking spaces and two private access driveways to connect the parking areas with Route 4. Route 4 will be modified to add a right-turn deceleration lane near the western project driveway for traffic coming into **the** project along Route 4 from the west, and to add a left-turn lane near the eastern project driveway for traffic coming into the project along Route 4 from the east. A fire pond will be created on the northern part of the property.
  3. The project site is located on the southeast side of Route 4 approximately 500 feet east of Route **4's** easternmost intersection with Vermont Route 12. The site is approximately four miles east of downtown Woodstock, .7 miles east of Taftsville, and 3 miles west of Quechee. The Ottauquechee River lies west of the site on the other side of Route 4. Babcock Brook lies south of the site and flows west toward the river.
  4. The project tract is roughly triangular in shape with its longest side approximately 1066 feet in length along a broad bend in Route 4. On the southern boundary of the tract is a parcel owned by Britton Lumberyard. Babcock Brook flows through the Britton parcel. The northern boundary of the tract runs along the border of the towns of **Hartland** and Hartford. On the eastern boundary of the tract is property known as the "Justin Osmer Estate."
  5. Most of the site is presently level and open. The tract rises fairly steeply toward its eastern edge (which is the rear if one is facing the tract from Route 4) into a small hill. The eastern and southern edges are wooded. Wetlands exist on the site, running
-

from the southwestern edge of the site through the middle in a large semi-circle to the northwestern edge of the site. (Exhibit 51.14.) The site is currently unused. Portions of its open areas formerly were used as a borrow pit for loam and gravel extraction. As a result of this extraction, in some places near Route 4 the land is scarred and has little topsoil. An abandoned shed presently exists on the site.

Criterion 1(B) (Waste Disposal)

6. The proposed project will generate an estimated 4,897 gallons of sewage per day. On December 5, 1988, the Agency of Natural Resources, Department of Environmental Conservation, issued Water Supply and Wastewater Disposal Permit #WW-3-0019/3W0445-2 to the Applicants for "the construction of a shopping complex with design flows of 4893 gpd located off Route 4, Hartland, Vermont . . ." The Department's permit references various plans, including a "Sheet 1 of 6, Site Plan dated June 20, 1988, latest revision, November 21, 1988." The permit references the State of Vermont Environmental Protection Rules (EPR) which were effective September 10, 1982.
7. Exhibit S1.1B is labelled "Site Plan, Sheet 1 of 6," dated June 20, 1988, with revisions dated November 9, 1988, November 21, 1988, and November 8, 1989. The November 8, 1989 revision was to eliminate a fourth building, a bank, which had been part of the Applicants' original proposal, and to replace the bank with parking and an expansion of the fire pond.
8. Exhibit S8.3B is labelled "Planting and Lighting Plan, P1," dated June 29, 1988, last revised December 21, 1989.
9. Exhibit S1.1C is labelled "Hartland Crossing Regrading Westerly Access, Revision to Site Plan, Sht 1 of 6," dated January 10, 1990. S1.1C was created to revise S1.1B respect only to the grading of the proposed western project driveway. This revision was done because S1.1B and S8.3B were inconsistent with regard to the grading of that driveway.
10. The Applicants plan to dispose of sewage through **an** on-site mound disposal system. Sewer pipes from the three buildings will bring sewage through a septic tank, pump chamber, and valve pit to the mound disposal area. (Exhibits S1.1B, 51.3, 51.6.)

11. The disposal system itself consists of a primary area and a replacement area. These areas are located on the western portion of the site near Route 4. **The** primary area is the closest part of the system to Route 4, being approximately forty feet east of the edge of the travelled way. The replacement area is the closest part of the system to one of the improvements to be constructed on the site as part of the project, being approximately ten feet south of one of two buildings which will be used for retail businesses. **S8.3B** depicts trees within the ten-foot area between the replacement area and this building.
  12. The mound disposal system will include absorption trenches. The finished elevation of the absorption trenches will be approximately 658 feet. The elevation of the bottom of the trenches will be approximately 655.5 feet.
  13. Wetlands are located south of the proposed mound system. (Exhibits **S1.1C** and **S8.3B**.) Running from the western driveway, the project's internal road will be constructed through these wetlands and some fill will be used. New wetlands will be created on either side of the western driveway. Existing wetlands are represented on the exhibits by dark, shaded areas, and new wetlands by cross-hatched areas. Exhibit **S8.3B** depicts the replacement area as being the closest part of the mound system to an existing or new wetland, with the distance approximately 40 feet. Exhibit **S1.1C** also depicts the replacement area as the closest part of the system to an existing or new wetland, with the distance approximately 60 feet. On both exhibits, the wetland which is closest to the replacement area is an existing wetland.
  14. The approximate elevation of the wetlands is 654 feet. (Exhibit **S1.1C**.) Standing water has been observed in the wetlands at this elevation.
  15. Exhibit S1.2 is labeled "Soils Information, Test Holes, 6-14-84, Quechee Meadows, Utilities - Site Plan," last revised June 21, 1985. The exhibit was prepared for a prior project which was proposed for the site. The exhibit depicts a Test Hole #20 located in the southwestern part of the site approximately in the area of the wetlands. The exhibit also depicts absorption trenches located approximately 110 feet north of the test hole at their closest point to the hole. Results from Test Hole #20 are stated to be "faint mottling at 60" ."
-

16. Exhibit 51.2 also contains results for Test Holes #16 and #17. These are located in the area of the disposal system depicted on the exhibit. The results state that there is no evidence of standing high ground water to a depth of five feet.
17. Exhibit 51.2 contains a table labelled "Groundwater Data" for Groundwater Monitoring Wells (GWM) #1, #2, and #3. GWM #1 is located north of the absorption trenches depicted on the exhibit, GWM #2 is located amidst the trenches, and GWM #3 is located to the south of the trenches. The trenches depicted on the exhibits are in the approximate location of the disposal areas proposed as part of the project at issue. No elevations are given for the location of the monitoring wells on Exhibit 51.2. The wells were dry at depths of six feet (#1), six feet, four inches (#2), and six feet, one inch (#3).
18. Existing elevations of the area in which the currently proposed disposal areas will be located are 656 feet at the lowest point and 658 feet at the highest point. (Exhibit S1.6.) If it is assumed that the elevation of the top of the above monitoring wells is 658 feet, then the wells described on Exhibit S1.2 would show no groundwater at an elevation of 652 feet because the test results of those wells show no groundwater above a depth of six feet.
19. The Applicants' design flow estimate for the proposed project is based on a number of assumptions: that the proposed restaurant will have 53 seats serving two meals per day; that the supermarket will generate sewage at 7.5 gallons per day per 100 square feet; and that there will be sixteen retail shops disposing of sewage at 100 gallons per day per shop. In addition, the Applicants plan to dispose of sewage from the proposed project in the absorption trenches at a rate of 1.5 gallons per day per square foot.
20. The Environmental Protection Rules include the following requirements:
  - a. The maximum volume of sewage to be disposed of in any single absorption trench field is to be 5,000 gallons per day; when design flows exceed that amount, two independent disposal fields are to be used. EPR § 7.08(A)(g), (h).

- b. In-ground systems of over 2,000 gallons per day are to have three feet of separation between the invert elevations of absorption trenches and the groundwater mound developed from the effluent disposal when added to the seasonal high water table at the site. EPR Chapter 7, Appendix 7-B.
- c. The minimum isolation distance between a disposal area and trees is to be 10 feet. EPR Chapter 7, Appendix 7-D.
- d. Waste from restaurants is required to pass through a grease interceptor. EPR § 7.07(B)(5).
- e. The maximum sewage application rate allowed is 1.5 gallons per **square foot** per day. EPR § 7.08(A).

The Applicants' sewage disposal proposal does not provide for a grease interceptor. The Applicants are willing to install such interceptors in the restaurant and supermarket interior plumbing systems.

The Applicants propose to fill and regrade the site so that drainage in the eastern one-third of the site flows northeast and drainage from the western two-thirds flows southwest. The northeastern flows will go through a grass-lined swale to the fire pond, and then through an existing **30-inch** concrete culvert under Route 4 to the Ottawaquechee River. The southwestern flows will go through grass-lined swales to a 36-inch culvert beginning on the edge of the southwestern portion of the site. The culvert will run under the Britton Lumberyard property, along a right-of-way deeded to the Applicants, to an outfall on Babcock Brook.

On December 20, 1988, the Agency of Natural Resources, Department of Environmental Conservation, issued Discharge Permit #1-0768 for the **Hartland Crossing Shopping Center** (Exhibit S1.7). The permit allows discharges to the Ottawaquechee River and Babcock Brook as described in finding 22, above. The waste which is permitted to be discharged is described as "[s]tormwater runoff from paved roads, paved parking lots, roofs, and natural terrain after treatment of the runoff via grass-line [sic] **swales.**" The purpose of treatment in the swales is to minimize potential pollution from the stormwater runoff discharges.

- 24. The proposed project will not involve the deliberate injection of waste materials into groundwater or wells.
-

Criterion 1(C) (Water Conservation)

25. The proposed project will use 3.5 gallon per flush toilets and 2.5 gallon per minute faucets. It is feasible for the Applicants to use 1.5 gallon per flush toilets and the Applicants are willing to do so.

Criterion 1(E) (Streams)

26. As part of the project, a rip-rapped outfall will discharge into Babcock Brook. This is the outfall from the culvert through which some site stormwater runoff will flow. The outfall will be located on the brook's eastern bank. The banks of Babcock Brook in the area of the outfall are steep and covered with rocks and bushy weeds. Approximately 40 feet from the proposed outfall location, Babcock Brook enters a large concrete box culvert and flows under Route 4. Land uses adjacent to Babcock Brook include residential and commercial uses.
27. It is feasible to place the stormwater outfall lower on the bank of the brook. This would make the outfall less visible. To do so, more disturbance of brush would occur during construction. Natural growth of brush eventually would obscure the outfall and rip-rap.

Criteria 5 (Traffic) and 9(K) (Impact on Public Facilities)

28. Describing and predicting traffic conditions is an inexact exercise which is susceptible to variation in assumptions, interpretations, and opinions. It is difficult to verify methodology used in making traffic assessments and predictions.
29. Route 4 is a major highway and is one of the few such highways which runs in an east-west direction across the entire width of Vermont. Route 4 is heavily travelled by Vermont residents and by tourists driving to resort or recreational destinations. Route 12 is a Vermont highway which runs north and south. Presently, there are no traffic signals on Route 4 between White River Junction and the Rutland area. The project site is not physically contiguous with Route 12 and no direct access to the project from Route 12 is planned. There is no traffic signal at the nearby intersection of Routes 4 and 12.

30. The section of Route 4 in the vicinity of the site is relatively flat and consists of two travelled lanes and shoulders. The speed limit of Route 4 in this area is 50 miles per hour (mph). The Vermont Agency of **Transportation's** recommended minimum sight distance for vehicles turning onto a 50 mph highway is 550 feet.
31. The village of Taftsville lies along Route 4 approximately .7 miles west of the intersection of Routes 4 and 12. A covered bridge exists just north of Route 4 in Taftsville. Town Highway No. 2 runs south of this bridge to Route 4. An unpaved town highway, River Road, runs north and west of the bridge to the Town of Woodstock. The bridge is on the National Register of Historic Places and is a one-lane bridge. River Road is a narrow road which has been designated a scenic highway.

Based on 1982-1984 data, the accident rate in the Taftsville area along Route 4 is 3.7 accidents per million vehicles, and the accident rate along Route 4 near the proposed project is three accidents per million vehicles. These are among the highest accident rates along Route 4. (Exhibit **W1.**)

In Taftsville, Town Highway No. 2 splits into two roads as it approaches Route 4. Its eastern approach merges into Route 4 at a 20 degree angle and its western approach merges into Route 4 at a 25 degree angle. To achieve adequate sight distance, the recommended angle of merger is 60 to 90 degrees. Angles of less than 60 degrees reduce visibility.

Current traffic along Route 4 in the vicinity of the proposed project is estimated to be as follows: average hour, 900 vehicles; design hour, 1300 vehicles; and average annual daily traffic, 9000 vehicles. Design hour is defined as the traffic volume which is exceeded only 29 hours out of the year. The above estimates are based on actual traffic counts taken during a week in October 1989, adjusted by year-round traffic estimates based upon year-long data obtained from an automatic traffic recorder maintained by the Vermont Agency of Transportation in Woodstock.

Various projections have been made of the number of vehicle trips which the proposed project will generate. The most conservative of these estimates, that is, the one which assumes the most traffic generation, is that the proposed project will generate approximately 66 new trips during the Saturday afternoon peak hour. This is

based on a scenario which includes, among others, assumptions that 19 vehicles per thousand square-feet of supermarket space will be generated and that fifty percent of all trips in and out of the proposed project will be so-called "pass-by" trips. Pass-by vehicles are those which, without the proposed project, will be on Route 4 driving by the area of the proposed project, but which will turn into the proposed project if it is built. Drivers in these vehicles will not have the proposed project in mind as a destination. New trips *are* those which would not exist without the proposed project; new trip drivers will make special tripsspecifically to go to the project.

36. The proposed project will generate one other kind of trip, which is a "diverted" trip. Diverted vehicles are those which will use the proposed project rather than go to other destinations. The drivers of these vehicles presently go to other destinations to procure those services which the proposed project will provide. These drivers will have the proposed project in mind as a destination and otherwise will not necessarily be on Route 4. The ratio of diverted trips to new trips is projected to be three to one.
37. Assuming the ratio of diverted to new trips stated above, as well as the 50% pass-by rate, the trips generated by the proposed project are estimated to total 528 during the Saturday afternoon peak hour, comprised of 66 new trips, 198 diverted trips, and 264 pass-by trips. All of the vehicles involved in these trips will be making turns in and out of the proposed project which they otherwise would not make.
38. It is estimated that at most approximately 19 trips will be added by the proposed project to traffic crossing the covered bridge in Taftsville during Saturday afternoon peak hour. Of these trips, at most approximately ten trips will cross the bridge and turn left onto Route 4.
39. Current estimated average peak hour traffic through the intersection of Routes 4 and 12 is just below recognized standards for establishing the need for a traffic signal at that intersection. It is projected that the proposed project will add at most approximately 27 vehicle trips to Route 12 which will pass through the intersection during the Saturday afternoon peak hour.

40. The Applicants' plans for reconstructing Route 4 in the area of the proposed project include a left-turn lane to be added for westbound traffic on Route 4 to turn into the eastern project driveway, and a right-turn lane to be added for eastbound traffic to turn into the western project driveway. No left-turn prohibition is planned for traffic which may pass the eastern project driveway and seek to turn left into the project via the western project driveway. No left-turn lane is proposed for such traffic. (Exhibit S5.5.)
41. Route 4 is currently a two-lane highway. The width of the travelled way is currently approximately thirty feet. A minimum twelve-foot width is recommended for traffic lanes. In the areas in which the Applicants plan to add lanes, Route 4 will need to be expanded to 36 feet to meet this recommendation. The Applicants do not plan any expansion of Route 4's travelled way in the areas of the added lanes, and therefore current lane width will be reduced.
42. The western project driveway will become the project's internal road, which will cross an area in which a wetland will be filled, and then will curve north. At the end of the curve on the road's eastern side, there will be an entrance to a parking lot closest to the supermarket. This entrance will be approximately 280 feet around the curve of the internal road from Route 4. The internal road will continue past this entrance. Immediately beyond the entrance, the internal road will pass a set of perpendicular parking spaces on the west. This is the first set of parking spaces which will actually adjoin the road if a driver enters the proposed project from the western project driveway. The internal road will continue north past an entrance to a parking lot which will serve the other two buildings, and then past a second entrance to the supermarket parking lot, and then will curve around to the west to join the eastern project driveway and Route 4. As the internal road makes this last curve, it will pass through a series of perpendicular parking spaces on either side of the road which end approximately 120 feet from Route 4. The distance between the eastern project driveway and the second entrance to the supermarket parking lot mentioned above will be approximately 400 feet around the curve of the internal road. (Exhibit S1.1B.)
43. The distance between the western and eastern project driveways will be approximately 560 feet measured in a straight line. Sight distances from both project

accesses in both directions will exceed 600 feet.

44. Traffic congestion is expressed in terms of "Level of Service (LOS)." LOS classifications are as follows:

LOS A - Little or no delay

LOS B - Short traffic delays

LOS c - Average traffic delays

LOS D - Long traffic delays

LOS E - Very long traffic delays

LOS F - Extreme delays

45. LOS E represents operating conditions at or near capacity level. Freedom to maneuver within the traffic stream is extremely difficult, and is generally accomplished by forcing a vehicle or pedestrian to give way to accommodate such maneuvers.

46. LOS F exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Vehicle queues form behind such locations. These queues are more severe than at LOS E.

47. Currently, vehicles turning left from the Taftsville bridge onto Route 4 encounter LOS D.

48. In 1986, traffic flow on Route 4 between Woodstock and Route 4's intersection with Interstate 89 was at LOS E.

49. The Vermont Agency of Transportation recommends that roads be at LOS C or better.

50. Based on the data cited in finding 34, above, and assuming that the supermarket will generate 19 trips per thousand square feet, the following levels of service have been projected during the 1993 design hour if the proposed project is built:

Right turn from western driveway onto Route 4 - LOS A

Left turn from Route 4 into the western driveway -  
LOS A

Left turn from western driveway onto Route 4 - LOS F

Right turn from eastern driveway onto Route 4 - LOS B

Left turn from Route 4 into eastern driveway - LOS A

Left turn form eastern driveway onto Route 4 - LOS E

The LOS for the left turn from Route 4 into the western driveway is based on a scenario in which no cars actually turn left into the project through that driveway.

51. Following project construction, it is estimated that vehicles turning left during design hour from Route 4 into the western driveway will face a vehicle flow in the opposite lane of approximately 668 vehicles per hour, meaning that the gap between vehicles will average approximately 5.4 seconds.
52. Following project construction, it is estimated that vehicles turning left during design hour from Route 4 into the eastern driveway will face a vehicle flow of approximately 585 vehicles per hour, meaning that the gap between vehicles will average approximately 6.2 seconds.
53. To make a left turn safely across a highway such as Route 4, a gap between oncoming cars of approximately 6.5 seconds is needed.
54. Projections have been made through the year 1993 concerning whether intersection of Route 4 and the proposed project's driveways will meet recognized standards for demonstrating that traffic signals are required. These projections indicate that no traffic signal will be required within that period.
55. In Land Use Permit #3W0445-2, the District #3 Environmental Commission prohibited the Applicants from allowing use of the western driveway by any vehicles other than emergency vehicles (Condition #8). If such a restriction is imposed, a traffic signal will be required by 1993 for the eastern driveway.
56. The Applicants will build and pay for all the improvements to Route 4 as shown on Exhibit 55.5, and are willing to pay for any other improvements deemed necessary to provide an adequate level of service, including traffic signals, at the project's driveways.

Criterion 8 (Aesthetics, Scenic or Natural Beauty)

57. Route 4 is a highway with significant scenic attributes. Between commercial districts, Route 4

sustains a number of commercial enterprises which are small in scale and separated by woodlands or meadows. This pattern has allowed Route 4 to remain predominantly rural in character.

58. Existing areas of concentrated commercial activity lie east of the project in Quechee and west of the project in Woodstock. The area in which the proposed project is to be located contains a mixture of rural and commercial uses. **Most** of the commercial uses are significantly smaller in scale than the proposed project. Many of these commercial uses, such as the Britton Lumberyard, are readily apparent from Route 4 and do not involve significant landscaping.
  59. In the eleven miles of Route 4 between Interstate 89 and Woodstock (which includes the location of the proposed project), there are important scenic natural and cultural features including Quechee Gorge, the Taftsville covered bridge and waterfall, views of the Ottauquechee River, and Woodstock village. Presently, woodlands, open meadows, and views of the River dominate the scenery outside village areas.
  60. Larger commercial uses within the eleven-mile stretch described above include Timber Village (approximately 20,000 square feet) and Waterman Place (approximately 13,500 square feet). The overall character of this stretch is rural residential with scattered commercial uses.
  61. The Applicants plan to place the largest of the three planned buildings near the rear of the site from the perspective of Route 4. This building consists of approximately 21,000 square feet of supermarket space and 16,000 square feet of retail space, or a total of approximately 37,000 square feet. At its closest point, the building will be approximately 370 feet measured in a straight line from Route 4. The highest point on this building is approximately 40 feet. The Applicants will construct a large parking area on the western side of this building, beginning close to the building and running west for about 310 feet. The Applicants also will construct some parking areas on the building's northwestern side, and on the other side of this parking area will be the two remaining buildings. No parking will be placed between those two buildings and Route 4; instead, that area will be landscaped and mixed evergreen and deciduous plantings will be made there.
-

62. Of the two buildings nearer Route 4, the larger building will consist of approximately 16,000 square feet of retail space. It is designed so that its northern and southern faces are very long and its eastern and western faces are narrow. The building's eastern face will front on Route 4 and its northern and southern faces will be perpendicular to Route 4. At its closest point, the building will be approximately 60 feet from Route 4. The highest point on this building is approximately 56 feet.
63. The remaining building will consist of approximately 4000 square feet. Its broad side will face Route 4. At its closest point, the building will be approximately 70 feet from Route 4. The highest point on this building is approximately 32 feet.
64. The buildings will generally be one story in height, except each building in some places will be up to 2 stories. The buildings will have steep pitched roofs covered with sloped sheet metal rising to peaks, clapboard siding, and small windows. Buildings will be painted or stained earth-tone colors.
65. The project buildings will be in the center of the site. To the south will be a parking lot, which is the lot referred to above as the supermarket parking lot, and the internal project road running to the western driveway. To the north will be the internal road, which hugs close to one of buildings as it runs to the eastern driveway. The fire pond will be located north of the internal road.
66. The project will involve the filling of 0.95 acres of wetlands. Some existing wetlands near the western driveway will be preserved and some destroyed (Exhibits **S1.1C**, 51.14 and **S8.3B**). New wetlands will be constructed in this area. In the center of the site, some wetlands will be filled so that the buildings and parking areas can be constructed. North of the buildings, some existing wetlands will be dredged deeper to allow construction of the fire pond, and some wetlands will be left untouched.
67. North of the internal road, where the fire pond will be constructed, a significant piece of the site will possess no improvements which will be readily apparent. The only actual improvement will be the fire pond. The area will appear to be an open area containing a pond.

68. The Applicants plan landscaping to screen the project, and will plant a variety of evergreen and deciduous trees and shrubs throughout the site. (Exhibit **S8.3B.**)
69. A wooded hillside exists at the rear of the site, which forms a natural backdrop for the project. The Applicants will leave this hillside intact.
70. Approaching the site, westbound travellers on Route 4 will first view the fire pond with trees around it in the foreground, portions of project buildings in the middle ground, and the wooded hillside in the background. Landscaping will block a full, dead-on view of the buildings.
71. As the westbound driver approaches the project's eastern access, the driver will see a sign for the project. The driver's view of the project buildings will be at an angle to the left; these buildings will be partially screened by trees. The driver's immediate view will be of the area in which the disposal system will be located and the wetland area and western access beyond. The area of the mound disposal system will appear to be an open, grassy area because the Applicants plan to cover the mound with grass and maintain it to appear as a grassy area. Continuing west, Route 4 begins to bend sharply away from the site.
72. Eastbound travellers will first view the project after passing the Britton Lumberyard. Their direct view will be across the grassy area of the disposal system to the project buildings, which will be partially screened by trees. At an angle to the right, these travellers will be able to see parking areas across a lawn; flowering trees and evergreens will partially screen the parking areas. The travellers will view a foreground consisting of a lawn, a middle ground containing views of the project buildings and parking, and a background consisting of the wooded hillside.
73. As the eastbound driver draws closer to the eastern access, his direct view will be of the fire pond area on the northern part of the site. The project buildings and parking will be visible at an angle to the right.
74. Project lighting will consist of indirect shoe-box fixtures. Locations and types of fixtures are shown on Exhibit **S8.3B** as small, square, dark blocks with yellow

circled areas in front of them. See also Exhibit S8.5.

75. The project will have two entrance signs made of wood which will not be internally illuminated but rather will have down-shielded illumination. One sign each will be located near the western and eastern accesses. (Exhibits S8.3B and S8.6). No signs at the project will be neon or internally illuminated.

**Criterion 10 (Conformance with Local or Regional Plans)**

76. This application was filed on June 20, 1988.
77. The Two Rivers-Ottawaquechee Regional Plan was adopted on December 12, 1984. This plan is divided into two sections: a Two Rivers section and an Ottawaquechee section.
78. The Ottawaquechee section of the Regional Plan states at pages 33-34:

A land use plan map accompanies this plan text and is considered part of this plan. The land use designations on the proposed map are general in nature. A particular designation does mean that the recommended densities and uses are appropriate for most of the land, but at this scale it does not mean that such recommendation will be solely applicable to all land within the district. ... With such a designation system the possibility remains that there will be areas within districts which seem appropriate for more intensive use.

79. The area of the proposed project site is found on the Ottawaquechee Land Use Plan Map within an area designated "low density rural residential."\* (Exhibits T-2(1), T-14.)
80. Concerning low rural density districts, the Regional Plan provides at page 30:

The Low Rural Density District is an area with severe resource limitations. Areas of severe resource limitations exist where soils or depth to bedrock is shallow, the land's slope is between fifteen and twenty-five percent and elevation is

between 1500 and 2500 feet. Areas in the Low Rural Density District are often unsuitable for development. *it [sic] is* the policy of this plan that the Low Rural Density District be developed only where the density of development is equal to an average density of ten acres per dwelling unit and where assurances can be provided that development will not damage environmental quality.

Concerning medium rural density districts, the Ottauquechee section of the Regional Plan provides at page 30:

The Medium Rural Density District is an area with moderate resource limitations for development. Areas of moderate resource limitations exist where soil, elevation and slope conditions present recognized problems in land development. However, these resource limitations can be overcome through careful development design. It is the policy of this plan that the Medium Rural Density District be developed only under conditions which recognize the district's resource limitations, plan to insure environmental quality and have a density equivalent to three acres per dwelling unit.

82. Concerning high rural density districts, the Regional Plan provides at page 29:

The High Rural Density District is an area with slight limitations for development activity. Areas of slight limitations are those which are relatively free of limitations imposed by soil composition, elevation or slope of the land; or the limitations imposed are easily overcome. Development of the High Rural Density District should be at a density equivalent to one acre per dwelling unit.

The above descriptions of rural density districts come from a chapter of the Ottauquechee section called "**Land Use Policies.**" Within this section, there are a *number* of statements concerning settlement patterns, including the following:

First in importance in formulation of the proposed land use pattern as part of the regional plan is consideration of the existing settlement pattern of the region. The region has already been settled into clusters of residences and other activities in the form of villages and hamlets

surrounded by less dense settlement, rural in character, or large spaces in natural vegetation. The existing settlement pattern has demonstrated itself to be [of] sociological, psychological and aesthetic benefit to the region, while at the same time providing a system of centers both efficient and economical for the conduct of business enterprise and for the provision of social and community facilities and services. This pattern should, therefore, be protected and enhanced, and this is best accomplished by hereby adopting as a policy the use of this pattern for guiding development of the region.

Since much of the region is not suitable for development, any growth occurring should be channeled into compact settlement centers. These centers - villages, hamlets, and residential groupings - should include open space and be developed with adjacent or surrounding open spaces and low rural densities to provide variety in the landscape and range of choice in living environments . . . .

The village should be the location of commercial activities in the town . . . .

The villages and hamlets are the most logical place for new development to occur . . . .

Regional Plan at pages 29-30. The Land Use Policies chapter also contains the following statement concerning economic and industrial development:

As indicated it is the preferred policy of this plan that new commercial and industrial development occur within or immediately adjacent to existing village and hamlet centers. The designated village of each town should be the location of the communities\* principal commercial activities. The hamlets should contain stores and businesses more of a support nature to the surrounding residential neighborhoods.

Regional Plan at page 32.

84. In a chapter called "Growth," the Ottauquechee section of the Regional Plan provides:

As indicated in the opening section of this plan, it is the policy of the Ottauquechee Commission to

protect, enhance and encourage the traditional pattern of settlement of the Ottauquechee Region. This consists of concentrated areas of settlement in villages and hamlets surrounded by rural lands used for agriculture, forestry and open space. Future growth of the region should take place principally within the existing villages and hamlets and village and hamlet expansion areas. Those rural areas of the Land Use Map designated as High Density and Medium Density are the nest [sic] most suitable areas for growth activity. . . .

[I]t is the policy of this plan that the villages, hamlets and village and hamlet expansion areas of the region be the location of commercial activities . . . .

Within the rural and critical areas the type of growth would be commensurate with rural living. This includes agriculture, forestry, public and private recreation, land preservation of unique and natural areas and rural residential opportunities for full and part time Vermonters. The intensity of growth should be equivalent to one acre per dwelling unit in the High Rural Density District, three acres per dwelling unit in the Medium Rural Density District, ten acres per dwelling unit in the Low Density District.

Regional Plan at pages 32-33.

85. Exhibit T-14, the Land Use Map, designates village and hamlet areas, as well as village and hamlet expansion areas. The proposed project is not in such an area. The nearest such area is the village of Taftsville. The nearest expansion area is located west of Taftsville, on the other side of the village from the site of the proposed project.
86. The project site borders, but is not within, the Town of Hartford, which is a member of the Upper Valley-Lake Sunapee Regional Council. The project site is wholly within the Town of Hartland, which is within the geographic jurisdiction of the Two Rivers-Ottawaquechee Regional Planning Commission.

IV. CONCLUSIONS OF LAW

With respect to the Act 250 criteria at issue in this appeal, the burden of proof is on the Applicants with regard to Criteria 1(B), 1(C), 1(E), 9(K), and 10. 10 V.S.A. § 6088(a). Pursuant to 10 V.S.A. § 6086(c) and Rule 19, this burden of proof may be met in some circumstances by the introduction of various permits issued by other agencies.

The burden of proof is on the opponents with respect to Criteria 5 and 8. 10 V.S.A. § 6088(b). The Applicants nonetheless must produce enough facts for the Board to make positive findings. Re: Pratt's Propane, Application #3R0486-EB, Findings of Fact, Conclusions of Law and Order at 4-6 (January 27, 1987).

A. Criterion 1(B) (Waste Disposal)

10 V.S.A. § 6086(a)(1)(B) provides that, prior to issuing a permit, the Board must find that:

[I]n addition to all other applicable criteria, the development or subdivision will meet any applicable health and environmental conservation regulations **regarding** the disposal of wastes, and will not involve the injection of waste **materials or** any harmful or toxic substances into ground water or wells.

10 V.S.A. § 6086(c) provides:

The board may by rule allow the acceptance of a permit or permits or approval of any state agency with respect to (1) through (5) of subsection (a) ... in lieu of evidence by the applicant. The acceptance of such approval, permit or permits shall create a presumption that the application is not detrimental to the public health and welfare with the respect to the specific requirement for which it is accepted.

Pursuant to Section 6086(c), the Board has promulgated Rule 19 concerning presumptions. In relevant part, the rule provides that the wastewater and discharge permits introduced by the Applicant create presumptions of compliance with respect to waste disposal. Rule 19(E).

Rule 19 presumptions may be rebutted. Rule 19(E) provides in relevant part:

If a party challenges a presumption, it shall state the reasons **therefor** and offer evidence at a hearing to support its challenge. If the commission or board

concludes, following the completion of its own inquiry or the presentation of a challenging party's witnesses and exhibits, that a preponderance of the evidence shows that undue water pollution . . . is likely to result, the commission or board shall rule that the presumption has been rebutted. Technical non-compliance with the applicable health and water resources and environmental engineering regulations shall be insufficient to rebut the presumption without a showing that the non-compliance will result in, or substantially increases the risk of, undue water pollution .... Upon the rebuttal of the presumption, the applicant shall have the burden of proof under the relevant criteria ....

The Board concludes that Two Rivers, the party challenging the presumption in this case, has proven that the Applicants have designed their system to come just within various limits set by the applicable regulations and in some cases technically have not complied with those regulations. The Board is therefore concerned that, following project construction, deviations from design assumptions may occur during actual use, and that such deviations could result in waste disposal at rates greater than permitted by applicable regulations, with a consequent potential for water pollution.

Two Rivers has directed its challenge primarily to compliance with the Environmental Protection Rules (EPRs) effective September 10, 1982, pursuant to which the Applicants' wastewater permit was issued. As delineated in finding 20, above, the EPRs require that: waste flows into single mound systems not exceed 5,000 gallons per day; in-ground systems with flows over 2,000 gallons per day have three feet of separation to groundwater; the minimum isolation distance between trees and disposal areas be ten feet; waste from restaurants pass through a grease interceptor; and the amount of waste disposed of in absorption trenches not exceed 1.5 gallons per day per square foot.

The Applicants' estimated daily sewage flow is 4,897 gallons, just under the 5000 gallon per day limit. As shown in finding 19, above, this estimate is based on assumptions such as the restaurant's serving only two meals a day and the supermarket's generating no more than 7.5 gallons of waste per thousand square feet per day. An increase in the number of meals or in the rate of waste generation could easily result in exceedance of the 5,000 gallon limit for single mound systems. This would create a situation in which a single-mound system is handling daily flows in

excess of 5,000 gallons despite a regulatory presumption that such a system is inadequate to handle such flows.

Further, the Applicants' groundwater evaluations are not rigorous and it is difficult to discern from the evidence what the separation distance of the disposal areas will be to groundwater. The bottom of the Applicants' proposed absorption trenches will be at an elevation of approximately 655.5 feet. Standing water has been observed at 654 feet in the wetland areas to the south. The plans submitted by the Applicants show these wetland areas as being either forty or sixty feet away from the disposal areas. In addition, as shown in findings 15 through 18, above, it can be inferred that there is no groundwater in the vicinity of the proposed disposal areas above an elevation of 652 feet only if one makes assumptions based on data derived in designing a disposal system for a project previously proposed for this site.

In view of this uncertainty, the Board believes that it is possible that groundwater will be closer than three feet to the invert of the absorption trenches to be used as part of the proposed disposal system. While this possibility is not itself sufficient to demonstrate undue water pollution, the Board believes that it warrants close monitoring of the disposal system.

Moreover, the Applicants plan to plant trees within ten feet of the replacement disposal area. They do not plan to install a grease interceptor for the restaurant's waste but are willing to do so if required. They do plan to dispose of waste in the absorption trenches at the maximum allowed rate of 1.5 gallons per square foot per day. These parts of the proposal either do not technically comply with the EPRS (planting within ten feet and not installing a grease interceptor) or place the system just within acceptable design limits contained in the EPRS (application at 1.5 gallons per day). The Board believes that the EPRS include requirements concerning isolation distances, grease interceptors, and application rates in order to avoid water pollution.

Based on the above review, the Board has concluded that the evidence shows some technical non-compliance with the EPRS with respect to sewage disposal but that such non-compliance will not result in, or substantially increase the risk of, undue water pollution. The Board therefore concludes that the wastewater and discharge permits have not been rebutted under Environmental Board Rule 19.

Nonetheless, the Board would, if it were issuing a permit, include permit conditions to minimize the possibility of water pollution. As shown above, the wastewater permit was issued for a system which incorporates significant design assumptions, does not meet requirements concerning grease interceptors and isolation from trees, is no further than sixty feet from a wetland area, and which may be closer than three feet to groundwater. The presence of these factors increases the possibility of water pollution due to waste from the proposed project. Therefore, the Board would condition the permit: (1) to require the Applicants not to exceed **the design** assumptions delineated in finding 19, above; (2) not to construct the disposal areas any closer than sixty feet to the wetland areas as shown on Exhibit **S1.1C**; (3) not to plant trees within ten feet of the disposal areas; (4) to install a grease interceptor for waste generated by the proposed restaurant; and (5) not to dispose of waste in the absorption trenches at a rate greater than 1.5 gallons per square foot per day. The Board also would include in its conditions the retention of jurisdiction by the District Commission and requirements for bi-monthly monitoring of sewage flows from the proposed buildings and of application of sewage within the disposal system, and for quarterly reports to the District Commission and the Protection Division containing the monitoring methodology and results. On this basis, the proposed project complies with Criterion **1(B)**.

B. Criterion 1(C) (Water Conservation)

10 V.S.A. § 6086(a)(1)(C) provides:

A permit will be granted whenever it is demonstrated by the applicant that, in addition to all other applicable criteria, the design has considered water conservation, incorporates multiple use or recycling where technically and economically practical, utilizes the best available technology for such applications, and provides for continued efficient operation of these systems.

The Applicants intend to use 3.5 gallon per flush toilets and 2.5 gallon per minute faucets. The Applicants testified that it is technically feasible and they are willing to use 1.5 gallon per flush toilets. If the Board were issuing a permit, it would condition **the** permit to require use of 1.5 gallon per flush toilets. On this basis, the proposed project complies with Criterion 1(C).

C. Criterion 1(E) (Streams)

10 V.S.A. § 6086(a)(1)(E) provides:

A permit will be granted whenever it is demonstrated by the applicant that, in addition to all other applicable criteria, the development or subdivision of lands on or adjacent to the banks of a stream will, whenever feasible, maintain the natural condition of the stream, and will not endanger the health, safety, or welfare of the public or of adjoining landowners.

The proposed project includes an outfall which will be built on Babcock Brook and which will discharge stormwater runoff into that brook. A permit for the discharge from the outfall has been issued by the Agency of Natural Resources. The discharge will be treated by being run through a grass-lined swale.

The location of the outfall on the bank could be lowered to make the outfall less visible. Plant growth would then likely hide the outfall and the bank would appear to be closer to its natural condition than if the proposed outfall were allowed. If the Board were issuing a permit, it would include a condition that the outfall be lowered to the lowest possible elevation. On this basis, the proposed project complies with Criterion 1(E).

D. Criterion 5 (Traffic)

10 V.S.A. § 6086(a)(5) requires that, prior to **issuing** a permit, the Board find that the proposed project:

**[w]ill** not cause unreasonable congestion or unsafe conditions with respect to use of the highways ... and other means of transportation, existing or proposed.

The Board may not deny a permit pursuant to Criterion 5, but may issue permit conditions to alleviate impacts created by a proposed project. 10 V.S.A. § 6087(b).

The Board's review of the traffic impacts of the proposed project has focused primarily on the creation of unsafe conditions or unreasonable congestion in the immediate area of the proposed project, including Route 4 and the project driveways; the approaches to Route 4 from the covered bridge in Taftsville; and the intersection of Routes 4 and 12 immediately west of the proposed project.

In reviewing the traffic impacts in this case, the Board has used the most conservative traffic projections presented to it. **"Most conservative"** here means those reasonably reliable projections which show the highest traffic generation rates.

Criterion 5 is designed to protect Vermont from the consequences of unsafe traffic conditions and unreasonable congestion created by developments and subdivisions. Traffic experts testified during the hearings that traffic evaluations are at best an inexact exercise susceptible to wide variation in assumptions used and interpretations made. In view of this imprecision and the potentially fatal consequences of an erroneous approval, the Board believes it should take a conservative approach with respect to traffic projections in order to achieve the protective goals of Criterion 5.

1. Unsafe Conditions

The Board concludes that the proposed project will cause unsafe conditions with respect to Route 4. Specifically, the Board believes that unsafe conditions will be created at the western project driveway because it is likely that some drivers will attempt to make left turns into the proposed project via that driveway through gaps in oncoming traffic which are insufficient to make a safe turn. Further, the Board notes below that congestion conditions which will be created by the proposed project are likely to create and exacerbate unsafe conditions at the western driveway.

All traffic analyses provided to the Board in this matter have assumed that no drivers will use the western driveway to turn left from Route 4 into the project. Instead, all drivers are presumed to turn left into the eastern project driveway to enter the project.

The Board does not accept this assumption. All traffic projections supplied to the Board have assumed that a significant percentage of project traffic will be **"pass-by"** trips involving drivers who will drive by the proposed project without having the project as a destination and will turn into the project. Drivers will be passing the proposed project on a highway with a speed limit of 50 mph. The Board infers from these facts that some drivers are likely to decide to turn into the proposed project after passing by the eastern project driveway going west because they will not have the project in mind as a destination and will make a rapid decision to turn into the project.

Further, the western project driveway is only 280 feet from the entrance to the parking lot closest to the supermarket, and there is no parking along the internal project road between the western project driveway and this parking lot. In contrast, the eastern project driveway is approximately 400 feet away from this parking lot, and there is a significant number of parking spaces along the internal project road between the eastern access drive and the parking lot. The Board infers from these facts that some drivers who are familiar with the proposed project are likely to use the western driveway to reach the supermarket because the western driveway provides more direct access to the supermarket than the eastern driveway, and using the western driveway will enable drivers to avoid going through the parking area along the internal project road near the eastern driveway.

Drivers who turn left into the proposed project through the western driveway will encounter an estimated vehicle flow of 668 vehicles per hour in the opposite lane, meaning that there will be an average gap between vehicles in that lane of approximately 5.4 seconds. The testimony before the Board was that a gap of approximately 6.5 seconds is needed to make a left turn safely on a road such as Route 4. Although the Board does not interpret this 6.5 second guideline as a hard-and-fast standard, the Board believes that an average gap of 1.1 seconds less than this guideline is too far below the guideline to be safe in the circumstances of this case. Thus, the proposed project will create unsafe traffic conditions on Route 4 in the area of the western driveway.

The Board concludes, however, that the proposed project will not create unsafe traffic conditions with respect to the Taftsville bridge area. Although the approaches to Route 4 from this bridge intersect Route 4 at angles which limit sight distance for vehicles turning onto Route 4, the Board believes that the project will not add a sufficient number of vehicles to exacerbate this existing hazard.

The Board similarly concludes that the proposed project will not create unsafe traffic conditions at the intersection of Routes 12 and 4 immediately west of the project because the volume of traffic which will go through that intersection from Route 12 as a result of the project is not likely to create a traffic hazard.

2. Unreasonable Congestion

The Board concludes that the proposed project will create unreasonable congestion along Route 4 in the area of the western project driveway and along the internal project road near the eastern and western project driveways. The Board also concludes that the projected traffic volumes **caused by** the project in the areas of the Taftsville bridge and the intersection of Routes 4 and 12 are not likely to create unreasonable congestion in those areas.

a. Route 4 in the area of the western project access driveway.

The Board believes that vehicles which turn left from Route 4 into the western project driveway will create unreasonable congestion on Route 4. Traffic flow along Route 4 in the area of the proposed project is already at LOS E. Vehicles turning left into the western driveway will have an average gap in oncoming traffic of 5.4 seconds. Because this is an average, some gaps will be longer and some shorter. As noted above, a 5.4 second gap is insufficient for a safe turn. Accordingly, some vehicles will likely pause for significant periods while waiting for a sufficient traffic gap to turn into the western project driveway. These vehicles will be waiting in **the westbound** lane and are therefore likely to create traffic queues behind them. On a 50 mph highway such as Route 4, which is heavily travelled and is one of Vermont's few major east-west highways, such a traffic delay is unreasonable.

b. The eastern and western project driveways.

As stated earlier, Criterion 5 requires that the Board evaluate traffic conditions on highways and "other means of transportation." The Board interprets the phrase "**other** means of transportation" to include traffic conditions on the project driveways and internal project road. If a highway is a means of transportation, then the driveways and internal road are "**other**" means of transportation and are clearly part of the proposed development.

The Vermont Agency of Transportation recommends that traffic flow be at LOS C or better. LOS C represents a traffic flow which includes "average traffic delays." Along the internal road near the project driveways, traffic flows for left turns onto Route 4 are projected to be LOS F at the western driveway and LOS E at the eastern driveway. LOS E represents operating conditions at or near capacity **level**; freedom to maneuver within the traffic stream is extremely difficult. LOS F means that the amount of traffic which is

approaching a point exceeds the amount which can traverse the point, resulting in extreme delays. Accordingly, the proposed project will result in unreasonable congestion along the internal project road near the project driveways.

c. Relationship of congestion to safety.

LOS E or worse conditions are likely to result in traffic safety problems. LOS E, in addition to being a condition where freedom to maneuver is extremely difficult, is described as a condition in which drivers are forced to make vehicles or pedestrians give way to accommodate maneuvers. If such actions are likely at LOS E, then they are more likely at LOS F, because LOS F is defined as a condition in which maneuvering is even more difficult than it is at LOS E.

The Board infers from these facts that, where traffic congestion conditions approach very long or extreme delays, some drivers are likely to take chances which they ordinarily would not take. In the context of turning left from the project driveways, such chances are likely to include attempting to turn left through a traffic gap which in better traffic flow conditions the drivers would consider insufficient for a safe turn.

Further, the Board believes that a change in driver behavior is also likely to occur in drivers who are turning left from Route 4 into the project's western driveway. The Board has concluded that vehicles attempting to make this turn will cause traffic delays. Given that lengthy delays are likely to encourage turning movements which are unsafe, delays in being able to turn left into the western driveway are likely to induce some drivers to make this turn through an insufficient gap in oncoming traffic. Accordingly, the Board concludes that congestion caused by the proposed project will create unsafe traffic conditions.

3. Permit Conditions

As stated above, the Board may not deny a permit pursuant to Criterion 5 but may issue permit conditions to alleviate a project's adverse traffic impacts. The Board has concluded, however, that there is no feasible permit condition or set of permit conditions which will alleviate the traffic impacts of the proposed project at its current scale. Further, as is explained below, the Board has concluded that the proposed project fails to meet the requirements of Criterion 9(K) with respect to Route 4, and that potential permit conditions also fail to meet the requirements of Criterion 9(K).

E. Criterion 8 (Aesthetics, Scenic or Natural Beauty)

10 V.S.A. § 6086(a)(8) requires that, prior to issuing a permit, the Board find that a proposed project "will not have an undue adverse effect on the scenic or natural beauty of the area, [or] aesthetics . . . ."

In Re: Quechee Lakes Corn., Applications #3W0411-EB and #3W0439-EB, Findings of Fact, Conclusions of Law and Order at 18-20 (January 13, 1986), the Board established a two-stage analysis for aesthetic evaluations. First, the Board determines whether the proposed project has an adverse effect on aesthetics. Second, the Board determines whether such adverse effect, if any, is undue.

Central to a determination of adverse effect is whether the proposed project fits within the surrounding context. The proposed project is located on Route 4, a highway with scenic attributes which runs through land which is largely rural in nature interspersed with pockets of commercial development. The closest commercial areas are Quechee to the east and Woodstock to the west. Within an eleven-mile stretch of Route 4 between I-89 and Woodstock, there are significant scenic natural and cultural features, as well as some commercial uses. Among the largest of these commercial uses is the 20,000 square foot Timber Village. In the immediate area of the project, land uses are a mixture of rural and commercial uses, with commercial uses much smaller in size than Timber Village or the proposed project. The land on which the project will be located has three important natural features: (1) close to Route 4, it contains an open field, (2) it has a wooded hillside providing a backdrop to this open field, and (3) it has wetlands running through the middle of the site. The open field shows signs of past gravel extraction.

The Board concludes that the proposed project will have an adverse effect on aesthetics or scenic or natural beauty. Land use along the stretch of Route 4 between I-89 and Woodstock is not primarily commercial and a significant portion of the land is used rurally or has other important scenic attributes. The proposed project will be much larger than surrounding commercial uses. Open space will be lost and some wetlands will be filled.

The Board concludes, however, that the proposed project will not have an undue adverse effect. Under the Quechee analysis, the Board concludes that an adverse effect is undue if it reaches a positive conclusion with respect to any one of three factors: (a) the proposed project will violate a clear, written community standard concerning

aesthetics, (b) the proposed project will be shocking or offensive to the average person, or (c) the applicant has failed to take available steps which a reasonable person would take to mitigate the adverse aesthetic impact of the proposed project. Quechee Lakes at 19-20.

The proposed project does not violate an applicable clear, written community standard regarding aesthetics. While the Board has concluded that the proposed project fails to comply with the applicable regional plan (see below), this conclusion is not based on aesthetic standards in that plan. The proposed project also will not be shocking or offensive.

Further, the Applicants have not failed to take available mitigating steps. For example, the Applicants plan to preserve the wooded hillside untouched as a backdrop. They also will preserve a significant portion of the existing wetlands and will add new wetland areas. The Board believes that the aesthetic effect of the newly constructed wetlands in this case is likely to be similar to that of the existing wetlands.

The Applicants further propose a comprehensive landscaping plan which includes tree and shrub planting to screen built areas from view from Route 4. The plan provides for two large open areas near Route 4: the fire pond to the north with associated open space, and the disposal areas to the south which will appear to be a grass lawn.

Moreover, the design of the proposed buildings themselves is commendable in that it effectively breaks up and screens the mass of the project. The Applicants have separated built space into three buildings. The largest of these buildings is set back far from the road and will be screened by evergreen and deciduous trees and shrubs and by the two smaller buildings. These smaller buildings, while set close to the road, are designed to minimize any adverse effect. One of the buildings is designed so that its narrowest edge is facing Route 4, with its longest edge perpendicular to that route. The other building is of a square footage (4000) which is much less than some other commercial uses along Route 4, such as Timber Village. Further, these two buildings will screen a significant portion of the project's parking spaces from Route 4 -because a portion of that parking area will be located between the two buildings and the third larger building.

Taken together, the Board believes that the Applicants' design and landscaping plan will mitigate the adverse effect of this project on the rural character and scenic attributes of the area. In fact, due to the design and landscaping, drivers who approach the proposed project will not see an aesthetically diminished view but rather will view the project buildings and parking only briefly and in the context of a landscaped setting which includes significant open and planted areas.

For the foregoing reasons, the Board concludes that the proposed project will not have an undue adverse effect on aesthetics or scenic or natural beauty. Accordingly, to ensure that the plans on which the Board is making its decision are carried out, the Board would condition the permit, if it were issuing one, on compliance with the landscaping and wetland plans (Exhibits S1.14 and **S8.3B**), and on maintaining the natural condition of the wooded hillside located on the eastern end of the site.

E. Criterion 9(K) (Impact on Public Facilities)

10 V.S.A. § 6086(a)(9)(K) provides that:

A permit will be granted for the development or subdivision of lands adjacent to governmental and public utility facilities, services, and lands, including, but not limited to, highways, ... when it is demonstrated that, in addition to all other applicable criteria, the development or subdivision will not unnecessarily or unreasonably endanger the public or quasi-public investment in the facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to the facility, service, or lands.

(Emphasis added).

The Board interprets Criterion 9(K) to call **for** two separate inquiries with respect to public facilities. First, the Board is to examine whether a proposed project will unnecessarily or unreasonably endanger the public investment in such facilities. Second, the Board is to examine whether a proposed project will materially jeopardize or interfere with (a) the function, efficiency or safety of such facilities, or (b) the public's use or enjoyment of or access to such facilities.

With respect to the second inquiry under Criterion 9(K), the Board interprets this inquiry to be different from

that under Criterion 5 concerning unsafe traffic conditions. Under Criterion 5, the Board looks to see whether a proposed project will create traffic conditions which are unsafe or traffic congestion which is unreasonable. The Board may not deny a project simply because such conditions are present. In contrast, under Criterion 9(K), the Board examines whether a proposed project will materially jeopardize or interfere with a public facility's function, safety, or efficiency or the public's use or enjoyment of or access to such facilities. Because public facilities include public highways, traffic conditions on those highways may be examined under Criterion 9(K), and if material jeopardy or interference will be created, the proposed project may be denied. Thus, the inquiry into traffic safety under Criterion 9(K) involves a higher threshold of material jeopardy or material interference, which is absent from the language of Criterion 5. This conclusion is consistent with the fact that a proposed project may not be denied under Criterion 5 but may be denied under Criterion 9(K).

The Board's review of Criterion 9(K) in this matter was limited to the effect on adjacent public highways. Route 4 is adjacent to the proposed project.

The Board concludes that the proposed project will not endanger the public's investment in Route 4. The Applicants will build and pay for all the planned improvements to Route 4 and for any other improvements which are needed to ensure an adequate level of service at the project driveways. Accordingly, if the Board were issuing a permit, it would condition the permit to require that the Applicants create an escrow account to pay for traffic signals at both of the driveways when a signal becomes warranted at either driveway.

The Board concludes that the proposed project will materially jeopardize or interfere with the function, efficiency, and safety and the public's enjoyment of Route 4. To begin with, the proposed project will create conditions on Route 4 in the area of the proposed project's western driveway which will materially jeopardize the safety and function of Route 4. Drivers turning left from Route 4 into that driveway will often have insufficient time to make the turn and may invite accident by attempting to force oncoming traffic to stop and allow them to make the turn. On a 50 mph highway, oncoming vehicles may not stop in time, and any collisions which result are likely to be serious in terms of potential bodily injury and property damage.

Further, delay is likely on Route 4 due to vehicle queues in the westbound lane which form behind vehicles waiting to turn left into the proposed project. Route 4 is a rural highway with significant scenic attributes. Traffic congestion diminishes the rural quality of an environment. Traffic congestion also will diminish the scenic quality of Route 4 in the area of the proposed project by forcing drivers to spend longer periods in the area of a large, commercial project. Thus, in the context of Route 4, delay caused by the western driveway will materially interfere with the function and efficiency of Route 4 as well as the public's use and enjoyment of that highway.

As noted above in discussing Criterion 5, the Board has evaluated potential permit conditions relating to traffic generated by the proposed project and has found them insufficient to alleviate the project's impacts. For example, the Board has evaluated whether to close the western project driveway to all traffic except emergency vehicles. This condition is itself likely to generate traffic impacts which do not meet Criteria 5 and 9(K). Specifically, such a condition **will require** that all traffic from the proposed project go through the project's eastern driveway. Perpendicular parking is planned along the internal project road close to the eastern project driveway, and therefore a hazard will be created by a significant increase in the amount of traffic which will pass through an area in which vehicles are backing in and out of parking spaces into the travelled portion of the internal road. A complete redesign of the project's internal parking and traffic flow would therefore be necessary to avoid such unsafe traffic conditions.

Further, use of only the eastern driveway for vehicular access to the project will result no later than 1993 in a need for a traffic signal at the intersection of Route 4 and the eastern project driveway. Such a traffic signal will mean increased traffic delays along Route 4, which is already experiencing LOS E in traffic flow in the area of the proposed project. In view of this potential for delay along a highway with rural character such as Route 4, the Board has concluded that a traffic signal at the eastern project driveway will materially interfere with the function and efficiency of Route 4 and the public's use and enjoyment thereof.

Similarly, the Board does not believe that a requirement to construct a left-turn lane for vehicles turning into the project's western driveway will be

sufficient to alleviate the project's traffic and highway impacts. Although such a lane would alleviate the potential for delay on Route 4, it would do nothing to lengthen the 5.4 second turning gap which drivers will face who seek to turn left into the western driveway.

For the foregoing reasons, the Board has determined that the proposed project fails to meet Criterion 9(K). In this regard, the Board notes that the highway impacts of this project are for the most part derivative of its size. A smaller project would appear to be unlikely to generate as much traffic or to require two driveways or a traffic signal if one driveway is to be used. Thus, a smaller project would appear to be unlikely to materially jeopardize or interfere with the values protected by Criterion 9(K).

F. Criterion 10 (Conformance with Local or Recfional Plans)

10 V.S.A. § 6086(a)(10) requires that, prior to issuing a **permit**, the Board find that a **proposed** project "**is** in conformance with any duly adopted local or regional plan ...."

The only issue in this proceeding with respect to Criterion 10 is conformance with the regional plan. The applicable regional plan is the Two Rivers-Ottauquechee Regional Plan. Although Upper Valley contends that the Upper Valley-Lake Sunapee Regional Plan applies, the Board concludes that that plan cannot be applied to this project because the project is not located within the geographic jurisdiction of the Upper Valley-Lake Sunapee Regional Council. See Re: P.F. Partnershin, Application #9A0169-EB, Findings of Fact, Conclusions of Law and Order at 10 (May 1, 1990).

The Ottauquechee section is the portion of the Regional Plan to be applied to the proposed project. The Ottauquechee section of the Regional Plan places emphasis on a policy that development should follow existing settlement patterns. These patterns generally can be described as concentration of commercial uses in village centers which are surrounded by hamlets with relatively densely concentrated residential uses. Outside of the villages and hamlets, land use is primarily rural or open space. The Regional Plan contains strong statements that new commercial development should be located within existing villages and hamlets or designated village and hamlet expansion areas, and that rural and open space areas should be left for uses which are compatible with the existing character of those areas.

The proposed project will not be located in an area designated as an existing village or hamlet, or village or hamlet expansion area. The proposed project is located in an area designated "low rural density district." Although it is clear from the plan that such a designation is intended to be flexibly applied, this type of development is not compatible with any one of the three types of rural districts identified in the Plan. The Plan contains policy statements for the rural density districts concerning the level of development density which is compatible with those districts. Overall, development is to be of a scale commensurate with rural living. For the low density district, the Plan looks for an average density of ten acres per dwelling unit. For even the high rural density district, the Plan seeks a density "equivalent to one acre per dwelling unit." The proposed project, which will have significant highway impacts and which will consist of 57,000 square feet of commercial structures on an 11.9 acre tract, does not conform to a density goal of ten acres or even of one acre per dwelling unit. Further; it is not of a scale commensurate with rural living.

The Board recognizes that regional plans tend to include general language, and that the Regional Plan does not specifically define "commensurate with rural living." The Regional Plan does, however, provide examples of compatibility within each of its three rural districts. In addition, what emerges clearly from the facts is that the proposed project will be a large commercial use of significant impact in an area in which the Regional Plan indicates such development should not occur. This is not a question on the margins of the Regional Plan, but rather clearly contrary to its basic statements and policies. Moreover, the Regional Plan itself recognizes its legally binding impact through the Act 250 process. Regional Plan at 23; 10 V.S.A. § 6086(a)(10).

In view of the strong statements in the Regional Plan that commercial development should be located in village centers, and the proposed project's large size, impact, and location in a rural district, the Board concludes that the proposed project does not conform with the Regional Plan.

---

V. ORDER

1. With conditions as noted above, the proposed project complies with Criteria 1(B), 1(C), 1(E), and 8.

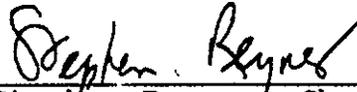
2. The proposed project fails to comply with Criteria 5, 9(K), and 10.

3. Land Use Permit Application #3W0445-2-EB is denied.

4. Land Use Permit #3W0445-2 is void.

Dated at Montpelier, Vermont this 10th day of August, 1990.

ENVIRONMENTAL BOARD



Stephen Reynes, Chairman  
Ferdinand, Bongartz  
Elizabeth Courtney  
Arthur Gibb  
Samuel Lloyd  
W. Philip Wagner

swain.dec(a8)