



Civil Engineering: Traffic • Municipal • Accident Investigations
Steven Schneider, P.E.
Principal

February 12, 2019

Chairman of Deerpark Planning Board
Bob Vicaretti, Sr.
Deerpark Town Hall
420 US-209
Huguenot, NY 12746

Re: **Dragon Springs**
140 Galley Hill Road
Cuddebackville, NY 12729

Dear Chairman:

Schneider Engineering, PLLC (SE) has prepared this updated report to discuss our concerns with the DEIS in conjunction with other documents we received for the above subject application. The proposed project site is what is known as Dragon Springs located at 140 Galley Hill Road, Cuddebackville, Town of Deerpark, Orange County, New York.

We have received and reviewed all of the following documents:

- **Draft Scoping Document for a Draft Environmental Impact Statement** for applicant Dragon Springs Buddhist, Inc., dated June 13, 2018
- **Draft Environmental Impact Statement (DEIS)** prepared by Lanc & Tully Engineering and Surveying, P.C., dated November 14, 2018
- **Traffic Impact Analysis for Dragon Springs Buddhist Inc.** prepared by Atlantic Traffic and Design, dated August 2, 2018
- **Plan Sheet C-1 OVERALL SITE PLAN** prepared by Kaijun Liang, P.E., dated January 28, 2018
- **Plan Sheet C-23 GALLEY HILL ROAD IMPROVEMENT PLAN** prepared by Kaijun Liang, P.E., dated March 9, 2017
- **Plan Sheet T-1 TITLE SHEET**, prepared by John D. Fuller, P.E., dated October 12, 2018
- **Plan Sheet S-1 EXISTING CONDITIONS**, prepared by John D. Fuller, P.E., dated October 12, 2018
- **Plan Sheet S-2 SITE PLAN**, prepared by John D. Fuller, P.E., dated October 12, 2018
- **Plan Sheet S-3 SITE PLAN DETAILS** prepared by John D. Fuller, P.E., dated October 12, 2018
- **Aerial Photos**

In addition to reviewing the listed documents, a site visit was made by SE personnel on November 9, 2018. This report proceeds to point out inconsistencies and contradictions within the DEIS that are supported by the other documents we received and SE's site visit notes.

1 Comac Loop • Suite 1B4 • Ronkonkoma, NY 11779 • 631 698-6200 • Fax 631 698-6299

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We offer the following comments:

1. Previous traffic impact studies were prepared in June 2001, August 2011, June 2015 and August 2016. We had asked for copies of these studies (through a FOIL request) but, as of this date, had not received them.
2. **The music hall is anticipated to be the largest site trip generator, and will greatly contribute to the anticipated 12-fold increase in traffic to the site.** The largest additions to the project are the 920-seat music hall and 1,140 stall parking garage. The 12-fold increase results in a future 2,200 daily trips on the road increased from what currently is approximately 175 daily trips. It should be noted the DEIS on page 14 states *“The Site will continue to operate 24 hours per day 7 days a week. The Project Sponsor anticipates regular onsite performances at the proposed music hall.”* This indicates the project’s future traffic will not be occasional; it will be on a regular basis. This, in turn, would require a large emphasis on the adjoining roadway system including preparing/addressing additional traffic safety issues including easy access to and from the site.
3. **There is a lack of details in the DEIS discussing surrounding roadway improvements, and in our opinion, a lack of mitigation that is required for the poor roadway conditions.** The proposed “loop”/jug handle at the south entrance is a key traffic safety element that must be addressed in the DEIS. The Traffic Impact Analysis report by Atlantic Traffic and Design, did not discuss the jug handle in the DEIS. The DEIS is also vague in saying that there will be improvements to the North Gate Bridge, North Gate driveway and Galley Hill Road. Since there was a lack of detail in the DEIS, the Site Plans were essential to analyze. After a review of the Galley Hill Road Improvement Plan (Plan Sheet C-23), the only roadway outside of the North Gate Driveway being improved is a small portion of Galley Hill Road in front of the North Gate driveway (only approximately 150 FT in both directions of the North Gate driveway). These proposed road improvements are not enough for the expected increase in traffic, especially considering the local roadways are extremely rural, curved, having extremely poor sight distances and, in many locations, cannot support the roadway width required for two-way automobile traffic, let alone bus traffic. The surrounding roadway network includes cars and buses that will be driving through the rural area at night with no streetlights, warning signs or proper pavement markings to guide these vehicles safely. The traffic study nor the DEIS discuss these hazards or how to mitigate them with roadway improvements.
4. **It is stated that there will be at most 2,200 daily trips to the site, but it is not discussed how the 2,200 daily trips will be distributed throughout the day.** The study claims that there will be 428 total trips during the weekday morning peak hour and 240 total trips during the weekday evening peak hour, only making up for 668 daily trips total for both peak hours. This only accounts for a third of the projected 2,200 daily trips. The study does not take into account that most of the

trips to the site will be generated by the proposed 920-seat music hall, with evening performances, stated to be expected on a regular basis. They claim that there are only 240 generated trips in the weekday evening peak hour. Their analysis does not accurately reflect the expected traffic projections. Analyzing the roadways when the site is not at its peak is inappropriate. The “Draft Scoping Document for a Draft Environmental Impact Study” in Section G.3 requires that the estimated traffic volumes are applied to the study locations utilizing appropriate arrival and departure distributions for the build conditions, to which the DEIS failed to do by not accurately accounting for the peak period of the site. Also, a Saturday peak period was not analyzed and should have been.

5. **After SE’s site visit and a discussion with local residents, concerns were raised about the guardrails south of the Neversink Bridge on Guymard Turnpike.** SE’s site visit on November 9, 2018 included driving the surrounding local roadways to view and record the conditions of the roads. The guardrails were observed to be dented, bent and in poor condition, indicating evidence of previous accidents. A discussion with local residents revealed that the guardrails and roadway were also in poor shape due to repeated flooding of the Neversink River resulting in undermined embankment supporting the road. The Town of Deerpark previously responded with performing support work on the road structure and stabilizing the guardrail. Therefore, the Town is aware of the local roadway’s history of being unsafe at times due to natural causes from the nature of the area. Yet, no improvements were discussed for any roadway outside of the North Gate driveway, North Gate Bridge, and the 300-foot stretch of Galley Hill Road in front of the North Gate driveway. **Furthermore, neither the Traffic Impact Analysis report nor the DEIS discuss an analysis of the accident history for any of the local roadways.** An accident history analysis is essential to determining how the roads will be impacted by an increase in traffic based on how vehicles have previously responded to the subject roadway conditions.

6. **The prorating type of analysis the study used is not an accepted nationwide standard engineering method to determine the actual future trips that will be generated.** The Traffic Impact Analysis report on page 7 states: “...the data collection effort...shows that it is a low traffic generator. ... Therefore...the proposed expansion has been calculated by prorating the existing trips per year...” They should have used trip generation data based on the industry-standard Institute of Transportation Engineers (ITE) Trip Generation Manual, the accepted nationwide engineering method to generate future trips. Additionally, they provide no explanation for their basis of prorating. For example, they increased the daily visitors from 75 to 2,000 persons. When adding a new use, such as the music hall, one of the major future traffic generators to the site, this is what must be addressed. The Traffic Impact Analysis report provides no explanation as to how they determined the 2,000 proposed visitors and 200 commuters. Table I on page 7 of the Traffic Impact Analysis report indicates that the visitors increase over 26 fold, mostly due to the theater. Their determining that the total growth factor is 12.6 is inaccurate. They are basically giving equal weight to the minimal visitors during the

day and circumventing the true trip generation peak, the evening. Again, a standard accepted method to determining generated trips should have been used.

7. **Since the study increases the daily number of visitors from 75 to 2,000, this high number of visitors must be attracted to the site because of the theater they are proposing unless there are unnamed future purposes or activities anticipated. Any other purposes that will attract visitors to the site should be discussed and addressed.** Our understanding is that the site will be used for meditation, education and the performing arts. The site currently accommodates 100 student residents who all live on campus. Sometimes there are organized student trips using buses, but no actual volume counts were given for that. Again, the study does not provide a basis for their prorating of future generated trips.
8. **The Draft Scoping Document for a Draft Environmental Impact Study in Section G.2 requires that traffic from other projects (proposed, approved, under construction or constructed but not yet occupied as provided by the Town) be added to determine and discuss future traffic conditions without the proposed project in place. However, the DEIS fails to discuss this.** In order to determine the Future No Build Condition traffic, it is standard procedure to project current traffic volumes using a background annual growth rate and add it to any additional traffic generated from other proposed developments in the area to the study the roadways. In the Traffic Impact Analysis report, traffic generated from other proposed developments in the area is not mentioned at all. Are there other proposed developments in the area? If there are, this could crucial to the analysis as it will add even more traffic onto the roads, making for even worse conditions than is stated.
9. **The Traffic Impact Analysis report's trip distribution analysis on page 8 is based on the existing travel patterns identified from the traffic counts they had taken, but those going to the music hall will not necessarily have the same traffic patterns that the commuters/workers might have.** Existing travel patterns cannot be used for the projected evening music hall traffic generator. Those coming to the theater will be from the local communities and will have to be looked at based on density of population and anticipated locations where groups of individuals might stay at local hotels and come to the theater. This must be included in the report as a basis for where the visitors will be coming from, not necessarily based on the current distribution, as the report did.
10. **Providing a 1,140-space parking garage is excessive based on the study's analysis.** For a 920-seat theater, presuming there are, on the average, two people per vehicle, it would only require 460 parking spaces. Why provide a 1,140 space parking garage when the peak trip generation will be due to the music hall? Recall, the study suggests there will be an even lower 240 expected trips during the PM peak hour when the music hall is in effect. Will the parking be used for other purposes during this time? There was no discussion of other uses of the site in the Traffic Impact Analysis report nor in the DEIS. Needing 1,140 spaces means that

you would expect at least 2,280 visitors to the site in the evening alone. Many of the current and proposed “commuters” would already have left the site by 5:00 PM which will have no effect on the parking demand. This should leave a sufficient number of spaces for visitors to park in Parking Garage A in the evening to go to the music hall. Furthermore, not only do the DEIS and Site Plan parking calculations SHOW that much less parking is required than what is being provided, their calculations should be clarified to explain the larger number of parking spaces provided.

11. According to the plans, there will be over 2,000 people attending the lecture halls and training rooms. How many are currently living on campus and how many in the future? Do any students have cars? What are the current maximum (peak) total residents/visitors on the site? Is it 2,000 without the theater in place? With the theater, is it over 4,000? How many cars do these visitors/residents have? These should be additional questions addressed by the Traffic Impact Analysis report.

12. Comments on Sheet S-2 SITE PLAN:

- a. The turning paths for the busses shown are quite confusing. They actually show one bus going westbound making a left turn into the jug handle. I presume that this bus would be entering the existing driveway from the eastbound direction because of the acute angle of the driveway that would require making a sharp right turn. Interestingly though, the bus appears to be going into the embankment on the south side of the loop. This is somewhat confusing.
- b. They show a bus making a right turn heading eastbound and going into the jug handle. This shows that if the movement is being considered, and there is a vehicle coming out of the jug handle at that entrance, there will be a conflict between the two vehicles. The jug handle is not wide enough to handle two-directional traffic.
- c. They also show a vehicle heading eastbound, making a right turn going into the east end of the loop and actually going into the wall on the south side as well. The movement doesn't make sense and, of course, going into the wall doesn't make sense either.
- d. It should be realized that any movements at or near this section of the roadway will have an unsafe site distance and will increase the likelihood of traffic accidents due to the extremely poor configuration. The problem with this site being used for large trip generators is that it is extremely difficult, if not impossible to work with the current adjoining roadway system. These types of usages cannot work in this environment and should have been realized when the site was first considered.

13. The project's intended use appears to have expanded over the years compared to what was originally proposed to the Town. Originally the southerly driveway was for emergency use only. As time went on, it seems to become one of the major entrances. It is not clear on how many buses or how many

cars will be using the jug handle. It is not clear where the visitors are coming from. It appears to be impossible to determine the expected trips to/from the site. The roadway design depends upon these criteria. All proposed site plan development should wait until this all can be addressed.

The key to evaluating the traffic safety the site will have on the local roadway system is not just performing a typical Level of Service analysis of the two entering/exiting driveways, but analyzing the actual physical condition of the roadway and realizing how the cars and buses will adjust to the surrounding roadways. The location of the site for such a large traffic generator, including a large-size theater, is highly inappropriate because of the poor surrounding roadways. Extreme roadway curves, no lighting, extremely poor site distances and the roadway width cannot handle this type of trip generator. Many of the site visitors will be out-of-town visitors, most of which will not be familiar with the area roadway system. Once the site is fully operational, the demand placed on the extremely poor roadway system will create unacceptable traffic safety hazards.

We reserve the right to amend this report if additional material becomes available. Do not hesitate to contact us with any questions.

Sincerely yours,



Steven Schneider, P.E.
Principal

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