

Memorandum

To: Michael Andrade, P.E.
From: Jennifer Conley, P.E.
Date: May 3, 2015
Re: Traffic Impact Analysis Addendum Peer Review,
Sunset City Proposed Campground and Motocross/Off-road Park
Brookfield Road, Charlton, Massachusetts

Conley Associates, Inc. has been retained to review the traffic analysis provided with the application for the proposed campground and motocross park in Charlton, Massachusetts. Conley Associates, Inc. previously reviewed the Traffic Impact Analysis prepared by Bristol Traffic & Transportation Consulting LLC prepared in January 2015 (TIA). Conley Associates, Inc. prepared a memorandum dated January 30, 2015 (Conley January memo) that summarized the findings of that review and identified any remaining concerns. Jennifer Conley attended the public hearing on the project during which additional concerns were raised. During the public hearing, Lloyd Bristol provided Jennifer Conley with a letter dated February 18, 2015 (Bristol February letter) that provided responses to some of the concerns raised in the Conley January memo. Based on the comments provided at the public hearing as well as on Jennifer Conley's request for additional information, Bristol Traffic & Transportation Consulting LLC has prepared a Traffic Impact Analysis Addendum dated April 15, 2015 (TIA Addendum). Conley Associates, Inc. has reviewed that document to determine if the items in the Conley January memo as well as the traffic related comments made during the public hearing have been addressed. The findings are provided below:

Issues from the Conley January memo

Conley Associates, Inc. had reviewed the TIA and provided a list of remaining concerns in the Conclusions of the Conley January memo. Conley Associates, Inc. has listed those concerns below and provided comment on the responses provided in the TIA Addendum:

- 1. The data collection taking place on the weekend before Christmas raises a concern because it is unlikely that traffic patterns were representative of other Saturdays. The TIA did account properly for the adjustment of a Saturday in December to a Saturday in the summer. The TIA Addendum included weekday PM peak hour traffic count data collected in March 2015. Once that data was adjusted to an average month condition and then to a peak month condition, the weekday PM peak hour data compares very well to the adjusted December data. In fact, the December weekday PM peak hour data was conservatively high. Although this data does not specifically address the Saturday peak hour which was the time period of concern, because the*

Brookfield Road weekday PM peak hour traffic volume is higher than the Saturday peak hour, the more conservative peak hour has been analyzed.

2. *The TIA did not account for other developments proposed in the area, specifically the Jennings Road Extension subdivision.* The Bristol February letter detailed the trip generation expected to be generated by the Jennings Road Extension subdivision and outlined the fact that based on existing traffic patterns, most of the commuting traffic will be oriented away from the proposed site. Although the trip generation values are reversed for the two peak hours, the majority of the trips during the commuting peak hours will be oriented away from the Sunset City site. That fact as well as the generous growth rate lead Conley Associates, Inc. to conclude that the No Build projections included in the TIA are appropriate.
3. *There is a demonstrated safety concern along Brookfield Road, likely due to high speeds. The proposed lowering of the speed limit will probably be ineffective as vehicles are currently traveling over 10 miles per hour over the posted speed limit. Enforcement through police presence and/or speed feedback signs should be considered.* The Bristol February letter indicates that the Stopping Sight Distance is satisfied for a 40 mile per hour speed, 5 miles per hour over the speed limit. Although this may be true, the TIA pointed out that the 85th percentile speed for vehicles along Brookfield Road is 46 to 47 miles per hour. At those speeds, there is not adequate stopping sight distance available. Arbitrarily lowering the speed limit will not encourage compliance. In fact, the industry standard and MassDOT practice is to set speed limits to the 85th percentile speed. Driver behavior will only be changed by better enforcement and/or engineering solutions. The Town of Charlton should consider engaging the police department in this matter.
4. *The location of the site driveway at the crest of the hill will ensure the longest sight lines along Brookfield Road, but the sight lines will still be below the minimum required for the speed that vehicles are currently traveling. Other access points should be considered, if possible.* The Bristol February letter indicates that other access points are not an option for this minor site development. The planning board and staff should consider that statement. Their knowledge of the site environs should help them consider potential access points.
5. *In the event that another driveway location is not possible, the proponent should consider signage to alert drivers to the presence of their driveway with significant traffic entering Brookfield Road during events and/or in a permanent fashion.* No comment was provided on this item either in the Bristol February letter or the TIA Addendum. The Planning Board should consider signage as a condition of their approval.

6. *Additional information on other facilities should be reviewed regarding number of attendees and distribution over the course of the day. The estimates may be appropriate, but further explanation and backup is required. The proponent should verify that the traffic distribution to the interstate system is appropriate. The February letter responded to this item by indicating that two facilities in Connecticut were contacted and based on input from them regarding the vehicle counts on event days versus normal non-event days, the proposed site's trip generation was determined. The backup information was still not provided with the Bristol February letter.*

The TIA Addendum included additional data from events held at two facilities in Connecticut. Additional facilities were contacted but did not provide information. Based on the information regarding peak events at the Connecticut sites, the total number of daily vehicles included in the TIA was appropriate. The TIA Addendum provided further discussion confirming the appropriateness of the trip distribution for events.

7. *Based on the trip generation and distribution presented in the TIA, during the peak hour, approximately 40 vehicles are expected to pass through the intersection of Route 49 at Putnam Road/Brookfield Road. In the event that the Town of Charlton has a concern regarding the safety or operation of this location, Conley Associates, Inc. would recommend this intersection be included in the study area for this project. As outlined above, a modification to the trip generation and distribution may be required. Such a modification may alter this recommendation. During the public hearing for this project, concerns were raised regarding this intersection. The TIA Addendum provided a full analysis of this intersection. Conley Associates, Inc. verified that traffic count data was collected and adjusted appropriately to a peak month as well as into the future.*

Conley Associates, Inc. verified that the site trips were added to the Future No Build traffic volumes correctly and that the resulting volumes were input into the intersection analysis correctly. With the addition of the project traffic (side street left turns), the delays for vehicles exiting Putnam Road will increase significantly. Because the intersection is currently operating over capacity, the operations will fall to level of service F. Conley Associates, Inc. also verified that the crash data had been analyzed correctly. As presented in the TIA Addendum, the crash rate at this location is higher than the MassDOT average for unsignalized intersections.

In light of the poor operating conditions and higher than average crash rate, the intersection is a concern and a likely candidate for improvements. Because a potential option for this location would be signalization, the Planning Board could consider as a condition requesting the proponent to conduct a further evaluation regarding signalization of this location. A traffic signalization study could be used to

justify that improvement to MassDOT and/or future projects. Due to the minor portion of the site related traffic at this location, Conley Associates, Inc. does not believe that the design and construction of a traffic signal is appropriate mitigation, especially in light of the fact that a study has not been completed yet to verify that the minimum traffic thresholds (traffic signal warrants) are met.

Conclusions and Recommendations

Conley Associates, Inc. has reviewed the documents provided in response to the Conley January memo. The Bristol February letter and the TIA Addendum each provided additional information regarding the project. Although not all comments have been specifically addressed, overall Conley Associates, Inc. finds that the supplemental materials accurately analyze the impact of the proposed project. In general, the responses address the comments made in the Conley January memo as well as during the public hearing. Conley Associates, Inc. recommends that the Planning Board consider conditions to address outstanding concerns regarding high travel speeds and sight distance deficiencies at the site driveway as well as operational and safety concerns at the intersection of Route 49 and Putnam Road.