

Requirements for Traffic Impact Studies (Appendix N of the Anne Arundel County Guidelines for Traffic Impact Studies) that are not met, and a partial list of traffic study deficiencies:

(1) The study is not organized and presented in a logical and neat fashion. Material affixed to the study report after page 28 is unnumbered and not identified with any of the five appendices listed in the table of contents. Material in the attachments cannot be unambiguously identified when cited in the text.

(2) The Project number is not clearly identified on the cover.

(3) Traffic from the proposed Crystal Springs development is included by reference to an out-of-date study by McMahon (summary figure dated March 2011). Only information from other approved traffic studies may be included by reference.

(4) Traffic counts from studies one to three years old must be increased by 4% per year and traffic counts older than three years may not be used (McMahon study).

(5) Traffic generation for the proposed development has not been assessed using the Institute for Traffic Engineers Trip Generation Manual, 9th edition, as required by County Code. Other sources may only be considered for uses not covered by the ITE Manual. Contrary to the assertion in TC's TIS, the trip generation numbers quoted in the Traffic Study Scoping Letter were explicitly not approved by Planning and Zoning (email dated November 24, 2014, from David Braun).

The proposed athletic development consists of a soccer field, a baseball diamond, tennis courts, general recreational fields, camping and general recreation acreage, and a pool facility. Most of these uses are explicitly identified in the ITE Trip Generation Manual. For example, tennis courts (land use code 490) generate 3.88 trips per PM peak hour per court. Similarly, soccer fields (land use code 488) generate 17.7 trips, per peak hour, per field. Likewise, baseball fields generate 20 trips per hour during weekday peak hour, and 240 trips daily on Saturday and 40 trips per hour during Saturday peak hour. General recreation fields for uses such as lacrosse, field hockey, rugby or ultimate Frisbee are conservatively assessed using trip generation rates appropriate for soccer fields (LUC 488).

The standard of practice in the industry requires trip generation forecasts for such facilities to be assessed by summation of the trip generators for each individual facility, field, or use. Traffic studies for very similar athletic facilities using the approach described above are listed here as examples:

“Traffic Impact Study for Lakeside Park, Los Angeles, California”, November, 2011, prepared by Koa Corporation, 1100 Corporate Center Drive, Suite 201, Monterey Park, CA, 91754.

“Correia Middle School Sports Complex Project”, November, 2014, Draft EIR, Draft Transportation Impact Study, prepared by LOS Engineering, Inc., 11622 El Camino Real, Suite 100, San Diego, CA, 92130.

“Wellington Hills County Park Final Traffic Impact Analysis”, December, 2013, prepared by Gibson Traffic Consultants, 2802 Wetmore Avenue, Suite 220, Everett, WA 98201.

The trip generation numbers presented by Traffic Concepts do not comply with County requirements and greatly understate the trip generation of the proposed development.

(6) All calculations projecting future conditions (e.g., roadway classification, road rating, critical lane analyses, etc.) that utilize the TC trip generation numbers are consequently in error. Peak hour volumes for future conditions are substantially greater than those used in these calculations and assessments.

(7) No documentation is provided for TC’s assessment of road rating conditions.

(8) Road ratings for roads assessed by TC are biased consistently higher than appropriate. For example, Carrollton Road minimum pavement condition is assessed as “fair” but it exhibits faulting of cracks and joints, and rutting with rut depths in excess of 1 inch (and therefore “very poor” per AA County RRS).

Likewise, roadside friction, assessed as “fair”, is “very poor” per AA County RRS, with obstructions, drop offs, and steep slopes within four feet of the right edge of the rightmost travel lane. Residents routinely park automobiles and store boats and recreational vehicles along the side of Carrollton road, lacking other options.

(9) TC’s road rating for Carrollton road assesses “very poor” condition for sidewalks and assigns rating points of 7 for this condition. Carrollton Road has no sidewalks, and it is therefore unreasonable to assign 7 points in the RRS to this condition. The RRS assigns 7 points if “sidewalk is paved, but has some cracking or other deficiencies...(fair)” or if “sidewalk is paved but poorly maintained..(poor)” or if “Portions of the sidewalk are not paved and/or frequently obstructed (very poor).” But all conditions described obviously presume the presence of a sidewalk, where in fact there is none. All pedestrians must walk in the street. Under “Guidelines for Use of the Road Rating System”, an individual cell in the point assessment table shall be blank to “indicate that the particular point value cannot be achieved for that particular roadway classification”. A road with *no sidewalks* merits zero points for the sidewalk element in the RRS.

(10) Minimum sight distances along Carrollton Road are incorrect. The traffic study does not provide documentation for the sight distances. The traffic study does not include elevations nor does it reference measured sight distances (limited by virtue of elevation changes along the roadway and roadway curvature).

(11) Minimum intersection sight distances for roadway segments are overstated in the road rating system assessment, resulting in assignment of excessive points. The minimum intersection sight distance is significantly less than stated for the intersection of Carrollton and Bay Ridge and the intersection of Carrollton and Old Bay Ridge Road.

(12) Traffic volume measurements and turning movement counts in Annapolis Roads and vicinity were performed during unrepresentative periods and underestimate existing traffic conditions. For example, traffic volumes were measured on Carrollton Road on June 3,4,5, 2014. This date is after the last day for seniors in the AA County school system (May 29, 2014), after graduation for St. Mary's seniors (May 23, 2014), and during a week of early dismissal (11:30 am) for students of Archbishop Spalding Catholic School and St. Anne's Episcopal school, among others. Almost all after school activities at all area schools had concluded well before the dates of TC's traffic volume measurements. Existing traffic volumes in the critical afternoon period are under normal conditions well in excess of TC's June 3,4,5 measurements.

(13) Approaches with individual unacceptable levels of service (E) exist and are projected under future conditions. Per the County Design Manual, Chapter III-N-6, the traffic study must address what actions are required to improve the service level to D or mitigate the impact of the traffic generated by the proposed development. The traffic study does not comply with this requirement.

(14) The study does not include each intersection from site access point(s) to and including the first intersection with an arterial road as required by Appendix N of the Design Manual, III-N-1 (excludes intersection of Carrollton and Harbor Drive, Carrollton and Pinecrest). These intersections have a limited sight distance by virtue of substantial roadway elevation variations.

(15) The study addresses only one of the two proposed development access points.

(16) The study does not justify the peak hourly volume numbers used in the road rating system calculations. These appear to be grossly inconsistent with future peak hourly volumes for the proposed development sourced from the ITE trip generation handbook.

(17) Absent a restriction on use of the athletic and recreational facilities in the morning hours or on weekends, projected future use must include these periods as well as the afternoon weekday periods.

(18) No existing or background traffic counts, or future traffic projections are provided for weekend conditions.

