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March 12, 2015

Claudia D. Husak
AICP, Planner II
City of Dublin
5800 Shier Rings Rd
Dublin, Ohio 43016

Subject: Riviera Traffic Impact Study Response to Resident Comments

Dear Ms. Husak,

This document serves to outline and respond to traffic study concerns documented in the Friends of Dublin Analysis Report, Dated November 13, 2014. Comments issued by individual residents at the November 13, 2014 Planning and Zoning Commission meeting generally reiterated points already documented in the Friends of Dublin Analysis Report and have not been addressed separately.

Comment 1

Friends of Dublin comment (¶3, pg 10): "The AM and PM trip count, while in line with Land Use Code 210 estimates do not match anticipated conditions. The development will include 247 properties. One could reasonably expect that especially in the AM, given multiple cars owned by families, that the traffic count would be equal to or greater than the actual number of dwellings. This underestimation of traffic volumes is further supported by the applicants own traffic study. Please note the AM peak is defined as 7:00 AM to 9:00 AM."

Response:

All trip generation estimates conducted for the Riviera development are based on industry standard methodologies documented in the Institute of Transportation Engineers' (ITE), Trip Generation Manual (9th Edition). The City of Dublin, Engineering staff supports this methodology and has conducted local studies to verify ITE trip generation rates accurately reflect conditions experienced within the City of Dublin. Additionally, the spokesperson for the Friends of Dublin report rescinded this comment during the Planning and Zoning Commission Meeting stating "I have consulted with other local traffic engineers and the trip generation estimates in the report appear to be accurate".

To provide additional clarification, the peak hour is actually the highest single hour documented between the hours of 7:00AM to 9:00AM, not the entire time frame. Traffic volumes published in the Impact Study are for a single one hour period. The projected AM peak hour volume does not equal or exceed the dwelling unit count because it is unrealistic to expect that everyone in the development would leave during a single one hour period. We fully expect that additional trips will be generated both before and after the morning peak hour.

Comment 2

Friends of Dublin comment(¶5, pg 10): "In the diagram below (2024 AM Peak Hour – Full Build) from page 15 of the traffic study, the traffic counts anticipated from the new development making movements that would indicate potential trips to Dublin Jerome High School will total 38 trips." (¶1, pg 11): As noted in the diagram above, ambient traffic from the existing Belvedere

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subdivision of 154 homes generates 113 right turns from Abbie Glenn Blvd onto Brand Rd heading towards Dublin Jerome High School at the southern exit of the subdivision. It is not reasonable to assume that a subdivision of 154 homes generates 113 trips while a subdivision of 247 homes will only generate 38 trips.”

Response:

The above comments outline a series of several misunderstandings of the content provided in the Traffic Impact Study (TIS). This TIS is a detailed engineering document of approximately 400 pages that thoroughly illustrate the development of all projected traffic volumes. All of the trip generation/distributional characteristics questioned above in the Friends of Dublin Report, are localized in nature. Trip assignment (origin/destination) values cannot be developed based on one individual turning movement or even one intersection within the study area. Origin/destination values for the Riviera development are founded on intersection turning movement counts conducted at all 10 existing study area intersections during both morning and afternoon peak hours. Traffic volumes from this large data collection effort are used to identify the distributional characteristics for the individual study area. Minor adjustments to this observed distributional data were made based on output from the City of Dublin's 2030 Travel demand Model. In summary, the trip distribution assignment for the Riviera development is based on field collected data for the entire study area; it is not based on unique/skewed characteristics observed at one study area intersection.

The following clarification is provided in direct response to the traffic volume comments associated with the Brand Road/Abbie Glenn Boulevard intersection:

The referenced 113 trips are not entirely generated from 154 homes. There are actually two subdivisions that have potential access to this intersection, Belvedere and Shannon Glenn, for a total of 315 dwelling units. However, a more significant impact to this number is cut-through trips stemming from existing capacity deficiencies at the Avery Road/Brand Road intersection. Traffic traveling southbound on Avery Road with a destination of westbound Brand Road is using these two subdivisions as a cut-through route. The presence of cut-through traffic was substantiated when one Belvedere subdivision resident spoke about observing this daily phenomenon at the Planning and Zoning Commission meeting.

The City of Dublin has acknowledged capacity constraints at the Avery Road/Brand Road intersection and is currently in the process of evaluating possible solutions. Improvements to this intersection are expected to reduce or eliminate cut-through traffic within the Belvedere/Shannon Glenn subdivisions. The traffic study has identified the percentage of site traffic that uses the Avery Road/Brand Road intersection, which the City will leverage in the development of an offsite infrastructure agreement.

Comment 3

Friends of Dublin comment (¶2, pg 11): “Using data provided by the Dublin City Schools, which estimate that there will be 1.24 students/home, we can expect this development to generate 306 students, of which they estimate 25% to be of high school age. Therefore one can assume that there will be 76 high school students in the Riviera development. A traffic study that anticipates only 38 movements with any potential of reaching the high school fails to consider the immediate surroundings and how those surroundings would impact the trip generation.”

Response:

The response for comment 1 above addresses trip generation characteristics for the development as a whole and also holds true for this comment. Despite the Friends of Dublin reference to the number of high school students forecasted for this development, it is inaccurate to assume this directly translates to vehicle trip ends. There are hosts of outside variables encapsulated within the ITE's trip generation rates including: multiple high school students living in a single dwelling unit, alternate modes of transportation such as walking/biking, shared trips, attendance at private school, etc.

Comment 4

Friends of Dublin comment (¶3, pg 11): "This application does not account for any improvements that may be required of surrounding intersections. Specifically, the traffic study estimates that 2,422 new trips generated daily. At the concept plan meeting, The Friends of Dublin presented traffic estimates of 2,044 new trips generated from the site. Adding those trips to the existing traffic counts provided by the City of Dublin at the Avery/Brand intersection of 10,320 trips per day, we could easily expect to realize upwards of 12,300 trips through the intersection.....which should be considered in the impact analysis of this rezoning."

Response:

The traffic study is responsible for identifying the impacts from both horizon year background traffic and site generated traffic volumes. The results of the analyses have identified an array of improvements at offsite intersections. All improvements are graphically summarized on study Figures 16 and 17 as well as listed below, for reference. The City of Dublin requires the study to identify the percentage of site traffic forecast at each intersection where an improvement is anticipated. These percentages are used to establish applicable financial contributions from the developer in an infrastructure agreement created by the City of Dublin. Offsite intersection recommended improvements include:

- Roundabout (Hyland-Croy/McKitrick)
- Roundabout (Jerome-Manley/McKitrick)
- Roundabout (Brand/Avery)
- Roundabout + SBRT lane (Hyland-Croy/Post)
- Roundabout upgrades (Hyland-Croy/Brand)

Comment 5

Friends of Dublin comment (¶2, pg 14): "The current application fails to meet the Connectivity Principle of improving the function of the street network and to also better serve neighborhoods. While this application does provide for neighborhood connectivity, it does so at great costs. Again, one only needs to look at the traffic study to see examples of unusual anomalies in the conclusions drawn by the study. As an example, in all scenarios listed, the number of cars that would make a movement from the Avery Rd. exit of the site onto Memorial Dr. is exactly zero. It simply is not reasonable to assume that there will be no traffic impact to Memorial Drive from a 240 home subdivision located immediately north of Memorial Drive.

Response:

This statement questions the site traffic distributional characteristics discussed in detail under comment number 2 above. The following clarification is provided in direct response to the concern that "exactly zero" trips were assigned to Memorial Drive.

The author of the Friends of Dublin Report is correct; some traffic should be expected to travel between the proposed Riviera neighborhood development and Memorial Drive. However, trip assignment from one neighborhood to another neighborhood during peak hours is very low and the application of zero trip ends to Memorial Drive was not an oversight. Peak hour time periods are dominated by commuter traffic with an origin/destination outside the study area.

It may seem counter intuitive, but the scenario in the study provides for a more conservative analysis. Trips assigned directly to Memorial Drive would have reached their destination and would not be further analyzed. By keeping these trips on the arterial street system, their impact is carried through multiple intersections until they have exited the study area. This does not imply that the Avery Road/Memorial Drive intersection capacity analyses are diminished. Trips that would have been assigned to Memorial Drive are actually assigned as northbound/southbound through traffic at this location and subsequently included in the intersection capacity analyses. This increase in northbound/southbound through trips models the effect of reducing gaps for westbound Memorial Drive turning traffic and is slightly conservative from a capacity analysis standpoint.

Sincerely,
EVANS, MECHWART, HAMBLETON & TILTON, INC.



Jason Smallwood, P.E.
Senior Traffic Engineer