

Symmes Trip Generation Comparison

Symmes Transportation Subcommittee, Arlington Transportation Advisory Committee
16 September 2004

Symmes Advisory Committee Recommendation

The Symmes Advisory Committee (SAC) determined that the traffic generated by Symmes Hospital in full operation should be considered the upper limit for the traffic generated by any proposed development on the site. From page 8 of the SAC *Recommendations to Special Town Meeting* dated May 5, 2003:

REQUIREMENT: Development shall be limited to the total number of peak-hour vehicle trips that were generated when the hospital was in full operation (estimated to be 375 vehicles during the evening peak hour as noted in Appendix I).

Note: no traffic counts were conducted during the period when the hospital was in full operation.

Vanasse Hangen Brustlin Estimates

Appendix I of the SAC report is the *Symmes Hospital Reuse Alternatives Transportation Assessment* memo from Vanasse Hangen Brustlin (VHB) dated February 13, 2003 and Revised April 17, 2003. From page 1 of the VHB memo:

Prior to construction of the 61,500 square foot North Wing in 1984, actual traffic counts indicated that the former hospital with approximately 112,000 square feet and Nurses Building with 25,000 square feet generated 245 vehicle trips during the morning peak hour and 255 vehicle trips during the evening peak hour, rates that are similar to industry standards for hospital uses. Based upon counts conducted in 1982, it is estimated that Symmes Hospital at full-build generated 375 vehicle trips during the evening peak hour.

From page 8 of the VHB memo:

To obtain a more accurate estimate of the amount of traffic generated by Symmes Hospital when in full operation, a trip generation rate based on the counts was determined. Prior to the addition of the North Building, the combined 136,500 square foot campus generated up to 255 vehicle trips per hour, the equivalent of 1.87 trips per 1,000 square feet. Therefore, the full build facility at 200,000 square feet would generate up to 375 vehicle trips per hour. Utilizing ITE rates for a 175,000 square foot hospital (LUC 610) and a 25,000 square foot medical office (LUC 720), it is estimated that the Symmes campus would have generated up to 365 vehicle trips per hour. This estimate, which is very similar to the counts based estimate, validates these findings.

An earlier VHB memo, *Symmes Hospital Reuse Alternatives Draft Transportation Alternatives*, dated January 8, 2003, estimated the daily traffic for the hospital in full operation to be **4,540** vehicle trips per day. The estimate appears in *Table 4 Trip Generation Comparison* on page 7. As noted below the Table, the calculation was based on ITE Land Use Codes 610 (Hospital) for 175,000 square feet and 720 (Medical-Dental Office Building) for 25,000 square feet.

Howard/Stein-Hudson Projections

On September 13, 2004, Howard/Stein-Hudson (HSH) released the *Symmes Hospital Redevelopment Transportation Overview*. From page 29 of the HSH study:

Trip generation data were derived from the Institute of Transportation Engineers (ITE) Trip Generation, 7th edition (2003). Trips were calculated on a per-dwelling-unit basis. The trips are then reallocated to vehicle, transit and walk/bike trips based on the area mode split (described in the next section).

Page 31 of the HSH study lists the ITE Land Use Codes used for their calculations as LUC 230 (Residential Condominium) and LUC 720 (Medical-Dental Office Building). From page 32 of the HSH study:

As shown, the project will generate a total of 1,369 entering and 1,369 exiting vehicle trips each day. These include 85 vehicle trips entering and 113 vehicles exiting during the A.M. peak hour and 125 vehicle trips entering and 138 exiting during the P.M. peak hour.

From page 33 of the HSH study, *Table 15. Comparison of Vehicle Trips* shows the Total Project Trips to be **263** during the PM peak hour, with an Average Daily Total of **2,738** vehicle trips per day.

Fay, Spofford and Thorndike Review

Gary Hebert of Fay, Spofford and Thorndike (FST) summarized his peer review findings on the HSH study in a letter to the Transportation Advisory Committee and the Arlington Redevelopment Board dated September 15, 2004. The subject of letter is *Peer Review - Symmes Redevelopment Plan Traffic Impact Study and Mitigation Plan*. From section 1.4 on page 3 of the FST letter:

An independent check of the trip generation calculations indicates that they were performed correctly.

Conclusion

The projected peak period traffic volumes for the Symmes redevelopment project will be comparable to those observed in 1982, before the North Wing was built, and are projected to be substantially less than the peak period volume when the hospital was in full operation.