



DuPage County
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DIVISION OF TRANSPORTATION

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MEMORANDUM

TO: Paul Hoss, Zoning Coordinator
Department of Economic Development & Planning

FROM: David A. Ziesemer, P.E., Traffic Engineer

DATE: January 30, 2009

RE: Review of CEMCON and METRO Traffic Impact Analyses
Resurrection Church – Winfield Township

REVIEW COMMENTS

The church development has two means of access to the site. The most direct and less disruptive access is from IL 38 (Roosevelt Road). The developer has elected to choose access from the local street system using Purnell Road. Local opposition to the project has resulted in Winfield Township requesting assistance in the review of the developer's traffic impact study. The Department of Economic Development and Planning (EDP) has asked the Division of Transportation (DDOT) to provide an impartial review.

Initial design standards are most critical for good design of isolated facilities where there is no availability for over flow parking on the local street network. On site parking must meet expectations, the local street network must be developed to meet design year expectations, and limits must be placed on the maximum square footage of the facility. Elements for the traffic impact study and parking design must include a reasonable passenger vehicle occupancy rate and peak arrival period factor. The developer's initial impact study used an occupancy rate of four passengers per vehicle (PPV). Recent church construction in Milton Township revealed this value to be inaccurate. Research of reasonable values using recognized transportation sources revealed a 1.93 PPV rate used by the Chicago Metropolitan Agency of Planning (CMAP) statistics for civic and religious activities. DDOT performed a study of its own at the Wheaton Bible Church in West Chicago which revealed a 1.8 PPV rate and a peak arrival period of 30 minutes using 75% of the arrival volume. The Wheaton Bible Church has 1,375 parking spaces for a 1,400 seating capacity and individual services fill roughly one half of existing parking. A 1.8 to 2.0 PPV rate using the 30 minute arrival duration appears to satisfy both the traffic design as well as final parking requirements for the Wheaton Bible Church.

This is the second review of this project. The first review advised the developer to adjust the passenger occupancy arrival period and resubmit the traffic impact study. In this second review, the developer submitted a revised scope reducing attendance from 1900 to 1500 seating. Included in the submittal are vehicle capacity and passenger occupant studies. The consultants passenger occupancy studies conducted for two churches having similar attendance identified a 2.5 to 2.8 PPV rate. The consultant, however, has submitted capacity studies including the suggested 1.8 PPV rate. The consultant's recommended improvements include a left turn bay at the Purnell Road entrance and widening improvements on Indian Knoll Road for exiting traffic. No additional improvements are planned at the intersection of Winfield Road and Purnell Road.

DDOT provided an independent Synchrony traffic capacity analysis using the reduced (1500) seating. DDOT analysis indicates the left turn lane addition at the Purnell Road entrance works satisfactorily for a 2.0 PPV rate but may require an additional right turn lane and an additional egress lane to operate satisfactorily using the 1.8 PPV rate. This analysis revealed similar results at the intersection of Winfield Road and Purnell Road requiring a southbound right turn lane with intersection reconfiguration. In order to guarantee adequate operation of the local street system for the 2018 design year without major improvements it will be necessary to reduce the size of the facility below the proposed 1500 seating level.

RECOMMENDATIONS

- In order to guarantee safe operation without major improvements to the local street system using Purnell Road as the main access, Resurrection Church should be limited to a maximum seating of 1400. Full build out should guarantee parking availability for 800 vehicles internal to the site. A separate left turn bay will be required at the Purnell Road entrance meeting IDOT requirements. Indian Knoll Road will require widening to meet Fire Code and to provide an exit to Roosevelt Road. The consultant should revise and resubmit the traffic impact study. The revised Traffic Impact Study should include turning vehicle counts for major intersections. Maintaining a higher seating capacity will require additional improvements to the Purnell Road entrance and the Winfield Road/Purnell Road intersection as mentioned previously.
- The developers cost to use Roosevelt Road as the main access to the Church appears to be no more than that to use Purnell Road when all improvement factors are considered. In fact access from Roosevelt Road would allow the Church to maintain their seating above 1500, would reduce adverse traffic distances, and would reduce the wear and tear to the local street network. This alternative would seem to be the advantageous alternative to all concerned parties. If this alternative is selected, the number of parking spaces provided would need to be increased in proportion to the increase in seating capacity of the sanctuary. It is DDOT's recommendation the developer also pursue this alternative with the IDOT permit staff and report back before the final Traffic Impact Statement is submitted. DDOT would be willing to support the developer in this approach.