

## SECTION 19

### TRAFFIC

#### 19.1 Purpose

The provisions of this section are intended to achieve the following purposes:

- A. To permit vehicular traffic on Woburn streets to move in an efficient manner without excessive delay or congestion.
- B. To permit emergency vehicles to reach homes and businesses with a minimum of delay.
- C. To reduce motor vehicle and pedestrian accidents on the City's streets.
- D. To consider and allow for safe and convenient routes for pedestrians and bicyclists.
- E. To promote cleaner air and to reduce automotive exhaust emissions caused by vehicles standing and idling for an excessive period of time.
- F. To promote the efficient use of the City's arterial and collector streets so that the use of local and neighborhood streets as shortcuts can be discouraged.
- G. To avoid excessive traffic demand on City streets that necessitate extraordinary City expenditures to maintain adequate and safe traffic flow.
- H. To encourage the use of sound traffic engineering principles and design standards to maintain a balance between the traffic generation capacity of dwellings and businesses in the City and the traffic carrying capacity of streets and intersections.
- I. To encourage the positive management of traffic flow consistent with City's other stated objectives, to include, but not limited to the reduction of single occupant vehicles, encouraging the use of public transportation and other modes.
- J. To encourage private sector participation in dealing with the City's traffic problems.

- K. To expand the City’s inventory of data about traffic conditions on City streets.

**19.2 Application**

This zoning ordinance is to be used as a guidelines for the special permit granting authority and for petitioners that submit traffic studies with their proposals.

**19.3 Traffic Study Required**

- A. A traffic study may be submitted with any application for a building permit, special permit ;or special permit with site plan review by the petitioner or the SPGA may add the requirement at their discretion for developments that meet or exceed the criteria shown in figure 1. A traffic study shall be submitted where required by other provisions of this ordinance. Note: The SPGA may require a traffic study based on project size thresholds.

Fig. 1

<u>Land Use</u>	<u>ENF Required</u>	<u>EIR Required</u>
Residential	50 units	350 units
Non-residential	25,000 sf	500,000 sf
Parking	200 spaces	1,000 spaces
Daily Vehicles	1,000 trips	3,000 trips

- B . The traffic study shall be conducted by a traffic engineer, who has the experience level necessary to competently conduct said study.

C.1. Definition of terms:

A.M. PEAK PERIOD, WEEKDAY: The two hours between 7 a.m. and 9 a.m.

P.M. PEAK PERIOD, WEEKDAY: The two hours between 4 p.m. and 6 p.m.

PEAK PERIOD WEEKDAY: The two hours between 7 a.m. and 9 a.m. and between 4 p.m. and 6 p.m.

PEAK HOUR: That 60 minute segment within the peak period consisting of four consecutive 15 minute segments, in which the highest traffic count occurs as determined by traffic counts.

RETAIL PEAK HOURS, WEEKDAY: The two hours between 4 p.m. and 6 p.m.

RETAIL PEAK HOURS, WEEKEND: The four hours between 10 a.m. and 2 p.m. on Saturday.

EXTRAORDINARY PEAK PERIOD: Exceptional hourly, daily or seasonal peak period associated with a use.

HORIZON YEARS: The opening year of the proposed development (or opening years for major phases of multi-phase developments) and five or ten years after the opening year.

SCOPING MEETING: A meeting between the proponent and City officials in order to determine the traffic study area bounds.

C.2 For the purposes of this analysis, proponents shall provide peak hour traffic data which is relative to the proposed use, i.e., commercial, residential and industrial uses shall provide weekday peak hour data and for retail p.m. peak weekday and weekend peak hours. For uses involving exceptional hourly, daily or seasonal peak periods, the SPGA may require that the analysis be conducted for that extraordinary peak period. The study shall also include ;an analysis for horizon years.

C.3 The traffic study area bounds shall be determined by the results of a scoping meeting(s), which shall include the applicant or his representative, the project traffic engineer and the City - represented by either the City Engineer, DPW Superintendent, Traffic Control Office, Fire Chief or Planning Board director. Many other elements of the traffic study can also be discussed at the scoping meeting(s) to avoid any misunderstandings regarding the expected scope of the study.

For the purposes of this analysis the following terms shall have their meaning indicated. The morning and evening “peak period” shall usually be that consecutive 60 minute segment within the peak period, in which the highest traffic count occurs as determined by traffic counts of the peak period divided into 15 minute segments. For uses which have an exceptional hourly, daily or seasonal peak period, the SPGA may require that the analysis be conducted for that extraordinary peak period.

A street or intersection “likely to be affected by the development” is one which has an Average Daily Traffic (ADT) of 2,000 vehicles or more and either:

1. carries 10 percent or more of the estimated trips generated by the development or

2. in the case of an intersection only, traffic from the proposed development will add 5 percent for more to the approach volumes.

**19.4 The Traffic Study shall include:**

- A. An estimate of trip generation for the proposed development, showing the representative peak hour and daily trip generation for weekdays and weekends. Where there is existing development of the same type of use on the site, actual counts of trip generation shall be submitted. Trip generation rates may be based on:
  - 1) The "Trip Generation Manual, latest edition" prepared by the Institute of Transportation Engineers, and if applicable,
  - 2) Data about similar development in Massachusetts or
  - 3) Data from professional planning or transportation publications, provided the methodology and relevance of the data from 2/ or 3/ is documented.
- B. An estimate of the directional distribution of new trips by approach streets and an explanation for the basis of that estimate. Where there is existing development of the same type of use on the site, actual counts of trip directional distribution shall be submitted. Also included, shall be an assignment of new trips to be generated by the proposed development and associated pass-by or diverted trips.
- C. An assignment of the new trips to be generated by the proposed development to the same segments of the City street network, which shall include state highways in Woburn, which are likely to be affected by the proposed development
- D. If so requested by the City, Average Daily Traffic (ADT) shall be determined on the streets likely to be affected by the development; counted for a 24 hour period. Note: This type of count should be collected with an automobile traffic recorder (ATR) machine. Alternatively, and if approved by the City, ADT may be estimated from peak hour counts at selected locations.
- E. Intersection turning movement counts for the study time periods at the intersections likely to be affected by the proposed development. In special circumstances where the peak traffic impacts are likely to occur at times other than the usual morning and evening peak periods, the SPGA may

require counts for those peak periods. Also, other intersections to be studied may result from City initiated scoping meetings, involving elected and/or appointed city officials.

- F. An inventory of roadway characteristics, including lane usage and jurisdictional responsibility of the principal approach streets adjacent to the development site and of the streets in the intersections which turning movement counts are taken, showing the width of the right of way adjacent to the site (for a distance of 300 feet on both sides of all driveways), traffic control devices, obstructions to adequate sight distance from the proposed site driveway(s), location of driveways within 300 feet of the site and the presence or absence of sidewalks and their condition. In addition to the foregoing, a summary of the 3 most recent years of accident data for the study intersections shall be submitted.
  
- G. In the case of a development in an abutting city or town, which will have a traffic impact on a street or intersection in Woburn which is one likely to be affected by the proposed development for which the traffic study is being prepared, the traffic impact of the development in the abutting city or town shall be included in the traffic study provided:
  - 1) That traffic impact is equal to or greater than that set forth in the test in 17-3 section C,
  - 2) The development has been approved or is in the process of being approved by official action of that abutting city or town, but has not opened for use prior to the date that the traffic counts required by this section were taken, and
  - 3) data on the traffic impact of that development, comparable to that required by this section, is available
  - 4) The results of the scoping meeting(s) recommend this action. The scoping meeting(s) shall also take into consideration that the traffic study include traffic from other developments in the No Build conditions plus the traffic from the proposed development. Said meeting(s) shall also consider that the proposed project can be analyzed independently, based on a No Build versus Build comparison. Note: Projects within Woburn, which meet the criteria stated, should also be included in the No Build condition.
  
- H. An analysis of the effect on the operation of those intersections in the Woburn street system likely to be affected by the development during the study peak periods of

- 1) the additional traffic generated by the development and
  - 2) additional traffic from other developments previously approved by the City of Woburn for which a traffic study was required, or be an abutting city or town as provided in 15-4 section G above, which have not yet opened for use prior to the date that the traffic counts required by this section were taken. Analysis of the capacity of intersections shall be based on traffic "levels of service" as described in the "Highway Capacity Manual, 1994 or latest Edition published by the Transportation Research Board. This analysis may include an intersection of an access drive serving a development and a segment of the Woburn street system.
- I. Where mitigating measures or trip reduction programs are proposed, they shall be proposed by the application and shall accompany the traffic study at the time of filing of the application. Where the proposed mitigating measure(s) is the construction of a traffic engineering improvement, evidence, such as an executed agreement document by the City, letters of support, or commitment, or approval, or the award of a contract, may be submitted to show that construction of the traffic improvement is likely to occur.
  - J. An estimate of the time and amount of peak accumulation of off-street parking.

The counts referred to above shall have been taken within the 12 months prior to the filing of the application. Upon request, the traffic engineer shall furnish an explanation of the methodology of the traffic study and any additional data, as needed.

### **19.5 Adequate & Acceptable Capacity Defined by Level of Service**

- A. Adequate capacity shall mean level of service (LOS) "D" or better as described in the "Highway Capacity Manual" 1994 or latest Edition, published by the Transportation Research Board. If the LOS resulting from the cumulative effect, referred to in section 15-5 is "E" or worse, the SPGA may consider this acceptable during peak hours, provided that the existing LOS (or delay or v/c ratio) under No Build conditions shall be achieved under Build conditions, significantly improved. A significant improvement will mean at least one level of service of rating, i.e., a level of service "F" must be brought up to an "E". In some cases, it may prove impossible to improve the existing LOS by one whole rating point and have it fall under adequate or acceptable

capacity as defined above. In such a case, the SPGA may consider capacity acceptable if the petitioner can show other types of positive improvements.

- B. Prior to granting a special permit or special permit with site plan review in those cases covered by other sections of this ordinance, the SPGA shall determine that the streets and intersections likely to be affected by the proposed development currently have or will have as a result of traffic improvements, adequate capacity or acceptable capacity as defined in section 15-6. The SPGA shall make its determination based on Existing, No Build and Build conditions. In making its determination of adequate capacity or acceptable capacity, the SPGA shall consider at least the cumulative effect on a street or intersection likely to be affected by the development, as provided in section 15-3 section C, of
1. existing traffic conditions
  2. estimates of traffic from other proposed developments which have already been approved in part or in whole by the City of Woburn for which a traffic study was required or by official action of an abutting city or town, which has not yet been opened for use prior to the date that the traffic counts required by this section were taken, and
  3. estimates of traffic from the proposed development.

### **19.6 Mitigating Measures to Improve Capacity**

The SPGA shall consider that various engineering improvements, or other method of positive traffic control, such as a traffic control officer, can improve the traffic carrying capacity of an intersection or street and improve the level of service rating to a higher and acceptable value. The SPGA shall consider such improvements, or other method of traffic control, in its determination and may make a conditional determination that adequate capacity is dependent upon the construction of the traffic engineering improvement, or other method of traffic control.

The SPGA may make a condition of its approval of the special permit or special permit with site plan review that the start, or any stage, of the construction of the development, or the occupancy thereof, is dependent upon the start or completion of the traffic engineering improvement or the start of another method of positive traffic control, such as a traffic control officer, on a permanent basis. A conditional approval shall be dependent upon at least a start of the physical construction of the traffic engineering improvement or the execution of an agreement with the City of Woburn for another method of positive traffic control.

Letters of support, or commitment, or approval, or the award of a contract are not to be considered as a start of construction. However, as the basis for making a conditional determination of adequacy, the SPGA may consider as evidence, that the traffic carrying capacity will be improved to a higher level of service, such letters of support, or commitment, or approval, or the award of a contract for construction of the traffic engineering improvement, or a proposed agreement with the City of Woburn for another method of traffic control.

### **19.7 Trip Reduction Requirements**

As a condition of its approval of a special permit with site plan review, the SPGA may require actions and programs by the owner and/or manager of a development to reduce the number of single occupant automobile trips made to a development, particularly during peak traffic hours. These requirements are geared toward an office environment, but can be applied to other uses to a certain extent. Such actions and programs may include:

providing a pass to employees for use on a public transportation system that service the development area,

use of carpools and vanpools,

scheduling of hours of operation, such as flex-time, staggered work hours, and spread scheduling that reduces trips during peak traffic hours.

preferential parking locations and arrangements for vehicles other than single occupant automobiles, or

restrictions on access to, or egress from, off-street parking areas during peak traffic hours.

Where such conditions are included, they shall include a reporting system which monitors the effectiveness of the trip reduction program. The SPGA may make a condition of the granting of a special permit or special permit with site plan review that 1) such monitor be directly responsible to and report to the Building Commissioner and 2) the applicant be responsible for the cost of providing such monitoring system.

If the Building commissioner determines that the conditions of the special permit or special permit with site plan review are not being met, he/she shall order the applicant to bring the development into compliance or shall take such corrective enforcement action as may be needed to insure compliance.



NOTE: The SPGA shall have the authority, depending on the type of project, to omit sections of the traffic study requirements, and require an alternate submission.

(Added 2/14/2001)

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