

CITY PLAN COMMISSION POLICY FOR TRAFFIC

I. PURPOSE

The purpose of this policy is to manage traffic impacts that may be created by subdivisions and land development/redevelopment projects so as to:

1. provide for the orderly movement of traffic, reduce the potential for accidents, allow adequate emergency response, and maintain adequate and safe streets;
2. discourage the use of neighborhood streets as shortcuts by promoting the use of arterial and collector streets;
3. encourage the use of traffic engineering design standards appropriate for residential and commercial neighborhoods;
4. encourage private sector participation in managing traffic;
5. create and maintain safe and convenient pedestrian access and bike paths;
6. encourage the use of public transit, carpools and vanpools;
7. promote clean air by encouraging/providing alternative modes of transportation and reducing vehicle delays and resultant exhaust emissions.

II. DEFINITIONS

For the purposes of this policy the following terms shall have the following meanings:

ADEQUATE CAPACITY: For arterial and collector streets, a Level of Service (LOS) D or better on every major approach at signalized junctions or roundabouts and a LOS C or better for the two main roadway left turning movements for un-signalized junctions [two/four way Stop].

For residential and subcollector streets adequate capacity shall be defined as LOS of C or better.

AVERAGE DAILY TRAFFIC (ADT): The number of vehicles passing a point on a street during a 24 hour period on a typical day.

CAPACITY OF AN INTERSECTION: The maximum number of vehicles which can reasonably be expected to be processed through an intersection or street segment during a one hour peak time period.

DESIGN YEAR: The fifth year after a development is scheduled to be completed.

EXCEPTIONAL PEAK PERIOD: An exceptional hourly, daily or seasonal period of trip generation (i.e., the December holiday).

IMPACTED STREET: A street or intersection projected to receive 50 or more peak hour trips from a development.

LEVEL OF SERVICE (LOS): A measure of the operating conditions of an intersection or street segment ranked on a scale from LOS A (optimum) to LOS F (failing) as defined in the Highway Capacity Manual latest edition by the Transportation Research Board.

PASS-BY TRIPS: The number of trips captured by a land use from existing traffic on an adjacent street.

PEAK HOUR: The four consecutive 15 minute periods of heaviest volume of traffic on a street or from a development.

PEAK PERIOD, MORNING: Generally, 7 A.M. to 9 A.M.

PEAK PERIOD, EVENING: Generally, 3 P.M. to 6 P.M.

PEAK PERIOD, WEEKEND: Generally, noon to 4 P.M on a Saturday or Sunday.

SIGNAL PHASE: That part of a traffic signal's time cycle allocated to a traffic movement or a combination of movements (including exclusive pedestrian movements) receiving the right- of-way simultaneously.

STREET:

ARTERIAL: An interregional street with an ADT of more than 5,000 conveying traffic between centers.

COLLECTOR: A street carrying large volumes of traffic [maximum ADT of 5,000] between arterial streets and residential and subcollector streets and having limited direct access to lots.

SUBCOLLECTOR: A street with a maximum ADT of 1,000-2,000 which provides access to lots and carries residential traffic to collector and arterial streets.

RESIDENTIAL: A street with low traffic volume (maximum ADT of 1,000) which provides frontage for access to lots and carries traffic with destination or origin on the street itself.

STUDY AREA: An area which encompasses all impacted streets.

TRIP: A single or one-directional vehicle movement.

TRIP ASSIGNMENT: Assignment of development generated and through trips to municipal streets and a development's driveways.

TRIP RATE: The number of trips per unit of independent variable (e.g., trips per dwelling unit, employee or square footage).

III. APPLICABILITY

These regulations shall apply to every application for a Major Land Development or Subdivision **[DEVELOPMENT]**.

IV. TRAFFIC STUDY

- A. For any Development in which the proposed activity under review will generate 50 or more new trips during any peak hour, a traffic study, prepared by a firm or individual registered with the State Board of Registration for Professional Engineers for the State of Rhode Island or other appropriate professional specializing in traffic planning, shall be submitted with an application for Preliminary Plan Approval. If no streets are impacted by a development, the City Plan Commission **[COMMISSION]** may determine that a traffic study is not required.

The applicant, at its discretion, may consult with the Commission during the Commission's review of an application for Master Plan Approval in order to identify the intersections to be studied and the appropriate elements to include in the study.

The applicant, at its discretion, may consult with the Department of Planning in order to identify the intersections to be studied and the appropriate elements to include in the study.

- B. Trip rates shall be based on Institute of Transportation Engineers Trip Generation, latest edition (ITE) or data from similar developments in similar settings in Rhode Island.
1. If ITE is used, the land use code, number of studies, weighted average trip rate, trip generation equation, standard deviation and coefficient for each land use used shall be provided. Use of the weighted average trip rate or trip generation equation to predict trips for each land use shall be based on the procedures set forth in ITE.
 2. If local trip rates are used, the methodology used to develop the data and the applicability of the data shall be provided.
 3. If data is available from ITE and local sources, the applicant may demonstrate why the ITE data is not accurate and should not be used. The Commission shall determine which data source will be used.
- C. All traffic counts including turning movements shall have been taken within 12 months of the date of submission and shall be adjusted for seasonal variation with an explanation as to how the adjustment was made.
- D. Projections of ADT's, turning movements and capacity analyses shall be adjusted for

(where appropriate):

1. background traffic with an explanation as to how said adjustment was made;
 2. truck traffic and buses;
 3. vacant space in existing buildings in the study area;
 4. trips to be generated by the proposed development based on full occupancy; and
 5. trips to be generated by developments in the study area that are under review or approved by a municipal or state agency.
- E. If an exceptional peak period is likely to occur, the Commission may require analysis of traffic for said period.
- F. Trips from an existing land use that are being replaced by a new land use may be subtracted as follows:
1. If trip generation and distribution for the new land use have the same characteristics as the land use being replaced, trips generated by the new land use may be reduced by an amount not to exceed the trips generated by the land use being replaced.
 2. If trip generation and distribution for the new land use do not have the same characteristics as the land use being replaced, trips generated by the existing land use may be subtracted from the street system.
- G. Where a project accesses or impacts a state highway, evidence of consultation with RIDOT shall be provided with an application for Master Plan approval. If offsite mitigation is required on state highway a copy of the Physical Alteration Permit as issued by RIDOT shall be provided with an application for Preliminary Plan approval.
- H. The traffic study shall have the following elements (when applicable):
1. Executive summary with:
 - a. scope of work to include location of the project, locus map and site plan, description of type and intensity of existing and proposed development and description of study area;
 - b. schedule for project development;
 - c. summary of existing and future traffic conditions including deficiencies in the street system;
 - d. summary of traffic impacts and proposed mitigation; and
 - e. listing of all permits required by the project and a summary of the status of permitting process for each required permit.
 2. Review of traffic studies undertaken within the study area during the prior 5 years that are on file with the State or in the municipalities within the study area.
 3. Description of roadway characteristics for all impacted streets to include:
 - a. a general inventory of land uses within 500 feet of the development and description of land uses on each impacted street;
 - b. identification of all curb cuts and driveways within 500 feet of the development;
 - c. physical characteristics including number of travel lanes; widths of right-of-way,

- travel lanes, sidewalks and shoulders; conditions of pavement, sidewalk and curbing; and roadway geometry and grades;
- d. inventory of traffic control devices including regulatory parking and warning signs, traffic signal permits, control units and description of signal phasing;
 - e. sight distances and obstructions to sight lines;
 - f. location and type of street lighting;
 - g. actual design [85th percentile] and posted traffic speeds;
 - h. number, type and location of accidents by year for the most recent three years;
 - i. description of transit system serving the study area including mode, frequency, schedule, routes, stop location and patronage;
 - j. time and peak volume of parking for the development;
 - k. location of pedestrian and bicycle routes;
 - l. location of churches, schools, parks and similar public or civic uses within the study area.
4. Description of traffic improvements to be completed in the study area prior to the design year with a schedule of implementation and identification of the parties responsible for implementing the improvements.
 5. ADT's on all impacted streets for the current year and the no-build and build conditions of the design year. Current ADT's shall be counted for a 48-hour period on a typical weekday.
 6. Existing site generated trips with a trip assignment.
 7. Identification of the peak hours (AM, PM, and Weekend) of the development and for adjacent streets with an explanation as to how the peak hours were selected.
 8. Development generated trips for the peak hours of the development and for adjacent streets and a trip assignment with an explanation as to how the assignment was made. If projected trips are adjusted for pass-by or diverted trips, an explanation as to how the adjustment was made shall be provided. Adjustment for pass-by trips shall be limited to 25% of site generated trips and 5% of the volume the traffic on the street serving the site.
 9. Peak hour(s) turning movement counts on all impacted streets for the current year and the no-build and build conditions of the design year.
 10. Peak hour(s) capacity analysis for the current year and the no-build and build conditions of the design year on all impacted streets. Said analysis shall be based on the Highway Capacity Manual Transportation Research Board, latest edition and shall include a queue analysis and critical volumes by signal phase or turning movement for each intersection studied.
 11. Peak hour(s) gap analysis for unsignalized impacted streets and for site driveways which experience excessive delay, queuing or are approaching capacity for the current year and no-build and build conditions for the design year.
 12. Measures to mitigate traffic impacts to include:
 - a. The process through which the mitigation will be authorized, financed, designed and implemented.
 - b. Peak hour(s) capacity analysis on all impacted streets and intersections based on the mitigation proposed.

- c. Review of potential impact to utilities, wetlands, archaeological/historical sites, etc.
- d. Implementation schedule. If the development or the mitigation is phased, the study shall show how the mitigation will be implemented and function for each phase.
- e. If site design and geometric changes are proposed, said changes shall be based on current engineering standards for turning pockets, transition tapers, lane widths, sight distance, multiple lane configuration, and right-of-way widths. A description of said changes shall include:
 - 1. scaled plan(s) (1"=40' preferred) showing:
 - a. existing and proposed layout lines, building footprint(s), parking lot areas and driveways;
 - b. the relationship of the site layout to existing rights-of-way with sight distances;
 - c. proposed geometric changes and widening (driveways, storage lanes, acceleration and deceleration lanes, turning lanes, etc.
 - 2. A traffic management plan to maintain traffic flow on impacted street(s) and allow access to abutting properties by vehicles, pedestrians, and handicap persons during construction.
 - 3. Measures to mitigate traffic generated noise and dust pollution.
- f. If traffic signalization is proposed, a signal warrant analysis based on Manual on Uniform Traffic Control Devices (FHWA, latest edition).
- g. Program to monitor the effects of the mitigation for period of up to three years after implementation.
- h. If signalization of an unsignalized intersection is proposed as mitigation, the applicant shall also provide alternative mitigation designs for the intersection including analysis of a roundabout.

V. TRAFFIC CAPACITY

- A. Prior to granting an approval, the Commission shall determine if there will be adequate capacity on all impacted streets for the build condition of the design year.
 - 1. If adequate capacity is projected on any impacted street for the no-build condition of the design year and a development causes a decrease in LOS, the Commission may require implementation of mitigative measures to restore the LOS to the no-build condition.
 - 2. If any impacted street does not have adequate capacity for the build condition of the design year, the Commission shall take one of the following measures:
 - a. The Commission shall require the implementation of mitigative measures to achieve adequate capacity.
 - b. If the Commission determines that the Development is not the cause for an impacted street having inadequate capacity and that the cost for mitigation is excessive given the size and nature of the Development, the Commission shall require the implementation of mitigative measures to insure that there is no

- increase in delay and capacity.
- c. The Commission shall deny the application if mitigative measures to achieve adequate capacity can not be implemented.
- B. The Commission may condition its approval on:
1. Completion of mitigation prior to issuing any occupancy permit.
 2. Posting surety to guarantee implementation of mitigation.
 3. Implementing measures to reduce trips generated by a development including use of:
 - a. employer subsidized passes for public transit,
 - b. carpools and vanpools,
 - c. flex time or staggered work hours,
 - d. preferential parking for high occupancy vehicles,
 - e. restricting access to or egress from off street parking areas during peak hours,
 - f. measures to promote pedestrian access,
 - g. measures to encourage bicycle commuting such as secured bike racks and locker and shower facilities.
 4. The submission of periodic reports on the effectiveness of the trip reduction programs as part of the monitoring required under Section H.12.g. above.
 5. Reducing of the size or intensity of the project.
 6. Phasing the development of the project.
 7. Obtaining all other permits where applicable.

VI. COMPLIANCE

If the Commission determines that its conditions on traffic are not being met, the Commission shall require the applicant to bring the development into compliance.

VII. WAIVER OF THE POLICY

If the Commission finds that any section or provision of this policy does not apply, it may be waived by vote of the Commission.

VIII. SEPARATION

Should any section or provision of these regulations be declared to be invalid, said section or provision shall not invalidate any other section or provision of this policy.