

**Public Works Engineering  
Traffic Impact Analysis Checklist**

Project:

Study Intersections:

Date:



**A. General Requirements**

1. The report shall be prepared by a professional engineer licensed to practice in Texas and trained and experienced in the application of traffic engineering.
2. Call Hurst City Engineer to set up a scoping meeting to discuss project limits prior to counts. An email correspondence with pdf maps maybe acceptable in lieu of meeting.

**B. Report Contents**

3. An executive summary covering:
  - a. The proposed site development
  - b. Major Findings of the analysis
  - c. Mitigation measures proposed, if necessary.
4. A vicinity map showing the location of the proposed development in relation to the transportation system or the area and location maps with turn counts broken down with am & pm peaks.
5. A complete description of the proposed development, including
  - a. A site plan
  - b. The total size and nature of the entire proposed development
  - c. The proposed location and traffic control of all proposed access points
6. A brief description of the current (and proposed. If applicable) land users adjacent to the site.
7. A description of the study area for the Traffic Impact Analysis as defined by:
  - a. All proposed site access points

The description of the study area shall include:

- a. Roadway names, locations and functional classifications
- b. Intersection lane configurations and traffic control
- c. Pedestrian, bicycle, and transit facilities

## 8. Assumptions

### Discussion of Assumptions:

- a. Distributions. Default value is to assume site distribution will be the same split as existing conditions. Call out any exceptions to this used.
- b. Cap on total combined trip reduction (passby and internal capture)
- c. Growth factors- provide analysis of both 0% growth rate and estimated% growth rate.

## 9. Existing traffic volumes (measured within the previous six months and adjusted to reflect current conditions) and operational analysis for all study intersections including:

- a. Average intersection delay
- b. Level of Service
- c. Volumes/capacity ratios
- d. Queue length analysis

## 10. Accident data summary and analysis within the study area for the most recent available three year period. Accident data can be obtained through City of Hurst Department of Public Safety.

## 11. Complete trip generation estimates for all phases and land uses of the proposed development should be calculated with the following requirements:

- a. The most recent edition of the ITE publication Trip Generation Manual should be used.
- b. The specific trip generation figures that are used for calculations should be noted in the report.
- c. If the ITE manual does not contain adequate data or the proposed land use is unique, a trip generations study can be conducted and its results used in place of the ITE manual.

## 12. Trip distribution of the trip generation information should be performed using directional trip distribution patterns based on historical data. A figure showing the trip distribution pattern will be submitted as part of the study.

## 13. Forecast traffic volumes and performance evaluation (including average delay, levels of service, and volume-to-capacity ratios) for the study intersections without development of the site for the five-year future.

## 14. forecast traffic volumes and performance evaluation, including the propose development traffic for all study intersections in the year that full buildout is expected to occur, as well as for the five-year future after buildout.

15. Safety analysis of the proposed site accesses, including sight distance (both stopping sight distance and intersection sight triangle) and operational characteristics.

16. Analysis of the right-and-left turn lane warrants, queue lengths, acceleration lanes, throat lengths, channelization, and other characteristics of the site-access driveways as appropriate.

17. Comparison of the location and spacing of the proposed site-access driveways with City of Hurst standards and the standards of the Texas Department of Transportation, if necessary.

18. Analysis of the parking needs of the proposed development, the adequacy of the proposed facilities to meet those needs as appropriate, and the conformance of the proposed parking facilities to applicable standards.

19. Description and analysis of mitigation measures necessary to bring identified intersections and locations into compliance with the applicable standards. Include analysis showing that these measures will bring these locations into compliance and Include signal, turn lane, or other warrant analysis as appropriate. Provide figures of: Existing peak hour volumes, site generated peak hour volumes, future peak hour volumes, trip distribution

20. An appendix which includes:

- Copies of raw traffic count data used in the analysis;
- Calculation sheets and/or computer software output for all Levels of Service, delay and volume-to-capacity ratio calculations in the analysis;
- Warrant worksheets for signals, turn lanes, signal phasing, all-way stops, and other proposed measures a appropriate.

Appendix reports and raw data files of printouts, warrant studies, count data shall be submitted on a CD and not by paper submittal. So shall models within HCS or Synchro.

### C. Standards

1. All signalized and all-way stop controlled intersections shall operate at a Level of Service "D" or better with a Volume/Capacity ration of 0.95 or Less. Other unsignalized intersections (including unsignalized private accesses) shall operate at Level of Service "E" or better for major street left turns an side street approaches. Although LOS "F" may be allowed if the movement has a relatively low volume-to-capacity ratio and there are no known safety problems at the intersection.

2. Acceptable analysis methods include the most recent Highway Capacity Manual or Synchro.

3. Signal timing used in capacity or progression analysis shall be use the same cycle length as is currently in use at the intersection. Unless specifically noted otherwise, and shall not exceed 120 seconds. Signal timing shall provide adequate green time for pedestrian crossings.

4. Peak Hour factors less than 0.75 or greater that 0.90 shall not be used unless justified by specific counts at that location.

5. All tube counts shall be a minimum of 48 hours.

6. Provide four copies of the Traffic Impact Analysis report for City of Hurst Staff review.