# Traffic Impact Analysis Guidelines


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This document is to clarify Dakota County Transportation Department's expectations of traffic information to be included in a traffic impact study document to be reviewed by the County. It will provide brief guidelines for traffic data collection, generation, analysis, and presentation. Preparer's of a traffic impact study must involve Dakota County Traffic Staff early in the study development process. Submittal of a scoping letter to the County defining the project study area and overall scope is required in advance of preparing a study. Subsequent discussions with the County need to occur to identify key intersections and roadway links to be incorporated, clarify analysis approach, and acceptable deviations from these guidelines.

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## *EXISTING TRAFFIC DATA*

1. The County website should be checked first to see what traffic data is available online. Visit http://gis.co.dakota.mn.us/website/dakotanetgis/ . Click on "Layers" tab, then expand the "Transportation – traffic" layer. Check the "Intersection Counts" box to show available counts. Click on the "i" icon and then the intersection or roadway segment to show information.
2. Dakota County traffic staff can be contacted to provide additional available existing county traffic data applicable to the study (counts, models, signal timing). Requests for large amounts of data may require the requestor to be responsible for providing staff for reproduction purposes and/or reproduction costs.
3. The County's transportation website should be referred to for information on current/planned roadway projects and roadway studies that have been conducted by the Transportation Department.
4. Traffic data used in the impact study should not be more than 3 years old. Older data must have prior approval by Dakota County staff to be used.

## *ANALYSIS TIME PERIODS, HORIZONS, SCENARIOS*

- Analysis years/periods:
    - Existing
    - Year of Opening – Assuming full build out (Base year)
    - Horizon year as determined by County based on development size (typically 5 years after opening for moderate sized developments and 20 years for large developments)
    - Any other significant time period (ex: additional phases of development)
    - Operation of horizon year mitigation measures for the year 2030

- Analysis scenarios:
  - No-build (Existing, Base Year, 2030)
  - Build (Base year, 2030)
- Analyze both the morning and the afternoon street peak hours for all scenarios to understand the full impact throughout the day. Include analysis of high amount of directional movement for that one hour period that may not occur during the street peaks (ex: school arrivals/dismissals, noon hour for heavy commercial areas, etc.)

### *ANALYSIS FRAMEWORK*

- Utilize and site national or state recognized resources and procedures (ex: ITE Trip Generation Manual 8th Edition; MnMUTCD 2005 Edition with 2007/2008 Revisions; Transportation Impact Analyses for Site Development", ITE, 2006).
- Market studies or local data may be used if after discussions with the County they are determined to be appropriate.
- Utilize appropriate traffic analysis tools (HCS, Synchro 7, SimTraffic, Rodel, Vissim)
- Discuss with the County the county transportation plan and system changes
- Discuss with local agencies their transportation and land use plans
- Incorporate previous studies performed in the area
- Current County standards, policies, and practices shall be incorporated throughout the analysis and impact mitigation recommendations, including but not limited to:
  - Identification of suggested access points based on traffic needs (consistent with County Transportation Plan Access Management and Spacing Guidelines)
  - Access management/type (right-in/right-out or partial median access)
  - Traffic control analysis and installation justification (Ex: Showing LOS F or meeting peak hour signal warrant alone does not justify signal installation, minimum 8 hours must be analyzed)
  - Signal timing parameters and operation (Ex: Do not utilize split phasing unless geometrics require it or lead/lag left operations)
  - Addition of lanes or extending turn lanes to provide necessary storage
- Detailed analysis input parameters and output results need to be included in the appendix. Hard copy and electronic files of the input/output for an application shall be provided with submittal of the report.
- Overall intersection Level of Service shall be included along with critical movement LOS.
- Mitigation measures must be thoroughly analyzed and outlined.



### *FIGURES/TABLES TO BE INCLUDED*:*

1. Existing roadway segment lanes and existing traffic control for the study area
2. Current average daily traffic volumes (AADT)
3. Existing street peak hours turning movement volumes and intersection turn lane configurations

4. Site trip generation table (Reference the ITE code for each land use or use of local data)
5. Directional site trip distribution (%)
6. Development generated trips only turning movement volumes
7. Background traffic growth, pass-by trips, and non-site development generated peak hours turning movement volumes for each scenario (also provide clear explanation for basis of volume determination and dispersion)
8. Base Year peak hours turning movement volumes, if different than existing ( Base Year No Build)
9. Base Year plus development peak hour turning movement volumes (Base Year Build) (3 + 6 or 9+6)
10. Future traffic peak hour turning movement volumes (2030 No Build)
11. Future traffic plus development peak hour turning movement volumes (2030 Build) (6 +11)
12. Any other identified significant time period peak hours turning movement volumes for Build and No Build scenarios as applicable
13. Future average daily traffic volumes (AADT)

*Refer to "Transportation Impact Analyses for Site Development", ITE, 2006 for examples of the types of figures and tables.

### *COUNTY REVIEW AND COMMENT TIMELINES*

A minimum of two weeks shall be provided to the County for review and comment of the study. More complex studies may require greater time for review and additional communications.