

## **SECTION 2B – 3 - DETERMINATION OF ROADWAY DESIGN**

### **OPERATIONAL / CAPACITY ANALYSIS**

A review of the volume and types of traffic and the physical characteristics of the roadway that includes capacity analysis or traffic flow simulation and considers potential roadway or traffic control improvement to improve traffic flow through the intersection(s) and along other sections of the roadway.\*

Traffic Data must now be analyzed in relation to the pre-determined Functional Classification.

The basic number of thru lanes required in order for the mainline to operate at a satisfactory level of service shall be determined by capacity analyses. Capacities of connecting and crossing roadways shall also be determined, taking into consideration plans for future improvements to these facilities.

Where at-grade intersections are proposed, a capacity analysis shall be made to determine whether or not the intersection will operate at a satisfactory level of service. If the analysis indicates an unsatisfactory service level, an interchange should be considered.

When interchanges are proposed or are being considered, a capacity analysis should be utilized to determine the type of interchange required.

Peak hour traffic projection to the design year shall be used for all capacity analyses.

Reference materials available at this time to assist in capacity analysis include:

1. Highway Capacity Manual
2. Design of Urban Streets
3. Highway Capacity Software

### **SAFETY ANALYSIS**

A review of crash data and the physical characteristics of the roadway that includes an evaluation of potential engineering countermeasures (physical roadway improvements and/or use of traffic control devices) to reduce the potential for crashes at intersections and along other sections of the roadway.

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\* Rev. 1/12