

Two Primary Methods to Calculate Road Impact Fees

Current Method – “Needs-Driven” (Inductive) Approach

Calculates the theoretical amount of roadway capacity “consumed” by a development and charges the development for the cost of that amount of roadway.

Advantages:

- Simplified data and planning requirements; can be developed at a low cost.
- Fewer points of argument with respect to the calculation methodology.

Disadvantages:

- Freeways, major intersections, interchanges, right-of-way acquisition, environmental mitigation, and bridges have variable costs that are difficult to capture with an “average” lane-mile cost.
- Jurisdictions usually compromise on a cost per unit of impact that is significantly less than the true ultimate cost of the facilities needed.

Example: A 600-unit single-family development generates 600 trips during the p.m. peak hour, with an average trip length of 5 miles, or 3,000 vehicle-miles of travel (600 trips x 5 miles). A suburban arterial lane (at LOS “D”) has a capacity of 600 vehicles per hour. Dividing the 3,000 vehicle-miles of travel by 600 vehicles per hour lane capacity, the development “consumes” 5 lane-miles of roadway. At an average cost per lane-mile of \$1.2M, the traffic impact of the development is \$6M (5 lane-miles x \$1.2M/lane-mile). The impact for each single-family unit would then be \$10,000 (\$6M/600 units). This amount would then be reduced to take into consideration other available funding sources, developer contributions, and whether the funds would fund all project types (state, county and municipal arterials).

Proposed Method - “Facilities-Driven” (Deductive) Approach

Totals the cost of the planned road improvements and allocates their cost to new development based on the traffic generation of each development.

Advantages:

- More direct relationship exists between fee revenue and project costs.
- Fees and facility costs may be balanced within each service area.
- More flexible in terms of which road improvements are included.

Disadvantages:

- Data collection, planning and modeling requirements are more critical to the fee calculation.
- The County does not have direct control over land use decisions; therefore input data can become outdated. This is less of a concern for a countywide program, and can be addressed through regular updates to the ordinance.

Example: A county has a detailed land use plan and a transportation plan that is balanced with anticipated growth across three service areas. In one service area, the plan includes new commercial and residential developments expected to generate an aggregate 600,000 vehicle miles of travel during the p.m. peak hour. The road improvement plan, based on detailed traffic modeling, includes road improvements totaling \$1.2 Billion, including State, County and Municipal projects. Identified funding (Federal, State, Local) total \$300 Million, leaving a \$900 Million unfunded need. Assuming impact fees fund all project types, any new development will be assessed at \$1,500 per vehicle-mile of travel (\$900M / 600,000). A single family home would be assessed a fee of \$7,500, assuming one peak hour trip and an average trip length of five miles (1 x \$1,500 x 5). An office building would be assessed at the rate of \$15,645 per 1,000 square feet, assuming 1.49 trips per 1,000 square feet and an average trip length of seven miles (1.49 x 7.0 x \$1,500).