APPENDIX: NEXT-GENERATION TRANSPORTATION IMPACT FEES

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Next-Generation Transportation Impact Fees

By Dwayne Pierce Guthrie, AICP, and L. Carson Bise, AICP

An increasing number of communities are realizing the fiscal and economic benefits of higher density, mixed-use development that offers alternative modes of transportation. Also, significant national demographics changes, shifting market preferences for walkable urbanism, and the importance of place making are compelling local governments to encourage redevelopment in urban and suburban centers where there is existing infrastructure capacity. Next-generation impact fees are an important implementation mechanism in the smart governance toolbox, particularly transportation impact fees that embrace multi-modal travel options.

Within the context of providing adequate infrastructure to accommodate new development, there is some overlap between development impact fees and other efforts to evaluate the adequacy of public facilities. All these techniques are best understood as relative points along a growth-management continuum (i.e., they are not mutually exclusive). At one end are Adequate Public Facilities Ordinances (APFO) and concurrency evaluations, based on specific development proposals and how they affect nearby infrastructure. At the other end are impact-fee studies that focus on growth-related system improvements needed to accommodate multiple development proposals within an entire service area.

In Florida, the unintended consequences of concurrency coupled with the Great Recession led to a legislative mandate for a viable alternative that was labeled “mobility fees” (Seggerman 2009; Florida Departments of Transportation and Community Affairs 2009). In some respects, mobility fees might be regarded as a simple rebranding, but the name does emphasize multimodal improvements and is consistent with the popular concept of complete streets. Some jurisdictions in Florida have broadened mobility fees to include the upfront payment of transit operating costs, which is an expansion of impact fees that have traditionally been limited to capital costs.

This PAS Memo will provide a general overview of impact fees, discuss the importance of examining the spatial relationship between the movement of people and transportation infrastructure needs, and offer ways to improve transportation impact fees so that they are in line with current demographic and market forces. The article concludes with practical steps for putting next-generation impact fees into practice. In this PAS Memo, the term “impact fees” is used broadly to cover all one-time payments for growth-related infrastructure, typically collected at the time a building permit is issued.

Background

Transportation impact fees are one-time payments imposed by a local government on new development that must be used solely to fund system improvements. In contrast to project-level improvements, impact fees fund growth-related infrastructure that will benefit multiple development projects, or even the entire community.

Any community considering impact fees should note the following limitations:

• Impact fees can be used only to fund capital infrastructure and cannot be used for ongoing operations, maintenance, or rehabilitation costs.
• Impact fees cannot be deposited in the local government’s General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected.

• Impact fees should not be used to increase infrastructure standards unless there is a funding plan to raise the level of service for existing development in the community.

During the 1980s, impact fees grew increasingly popular, especially in high-growth communities. This proliferation of impact fees was largely due to the decline in federal and state grants available for local governments, along with restrictions on local government revenue options, which led to impact fees becoming a common funding approach for local government capital facilities.

The general steps in a conceptual transportation impact fee formula are illustrated in Figure 1. The first step (see the left box) is to determine an appropriate demand indicator. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for transportation infrastructure is vehicle miles of travel generated by a development unit (e.g., a detached house).

The second step in the conceptual formula is shown in the middle box below. Infrastructure units per demand unit are typically called Level-Of-Service (LOS) or infrastructure standards. In keeping with the transportation example, a common infrastructure standard is arterial lane miles per vehicle miles of travel.

The third step in the conceptual formula, as illustrated in the right box, is the cost of various infrastructure units. To complete the transportation impact fee example, this part of the formula establishes the cost per lane mile to construct arterial capacity.

![Figure 1. Conceptual Impact Fee Formula. Source: TischlerBise.](image-url)

Although fee methodologies are tailored to each jurisdiction, there are three basic methods for calculating impact fees:

**Plan-Based Impact Fee Calculation** — The plan-based method allocates costs for a specified set of future improvements to a specified amount of development. The improvements are identified by a
facility plan. In this method, the total cost of relevant facilities is divided by total demand (e.g., vehicle trips for transportation, persons for parks, etc.) to calculate a cost per unit of demand. The plan-based method is often the most advantageous approach for facilities that require engineering studies, such as roads and utilities.

**Cost Recovery Impact Fee Calculation** — The rationale for the cost recovery, or buy-in, approach is that new development is paying for its share of the useful life and remaining capacity of facilities from which new growth will benefit. To calculate an impact fee using the cost recovery approach, costs are allocated to the ultimate number of demand units the facility will serve.

**Incremental Expansion Impact Fee Calculation** — The incremental expansion, or consumption method, documents the current level-of-service (LOS) for public facilities in both quantitative and qualitative measures. The LOS standards are determined in a manner similar to the current replacement cost approach used by property insurance companies. However, in contrast to insurance practices, clients do not use the funds for renewal or replacement of existing facilities. Rather, the jurisdiction uses the impact fee revenue to expand or provide additional facilities as needed to accommodate new development. This method is best suited for public facilities that will be expanded in regular increments, with LOS standards based on current conditions in the community.

"Old-School" vs. "Next-Generation" Transportation Impact Fees

As shown in Figure 2, traditional, or "old-school," transportation impact fees were designed with a suburban worldview and designed to increase capacity for vehicle travel. Old-school impact fees are typically uniform across the entire jurisdiction, are driven by generic formulas, tend to focus on 20-year master plans or build-out guesstimates, and are designed to fund infrastructure that will move vehicles.

In contrast, the basis of "next-generation" transportation impact fees is the recognition that impact fees can actually function like a land-use regulation to help shape development patterns. Planning and policy objectives drive next-generation transportation impact fees, which vary geographically to reflect cost differences, and are intended to move people rather than vehicles alone.

<table>
<thead>
<tr>
<th>Old School Fees</th>
<th>Next Generation Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;pay to play&quot; revenue source</td>
<td>contractual arrangement to build improvements</td>
</tr>
<tr>
<td>driven by generic formulas</td>
<td>driven by plans and policy</td>
</tr>
<tr>
<td>long range to buildout</td>
<td>Five- to 10-year planning horizon</td>
</tr>
<tr>
<td>one and done</td>
<td>ongoing planning and budgeting process</td>
</tr>
<tr>
<td>suburban focus</td>
<td>apply transect concept</td>
</tr>
<tr>
<td>uniform across jurisdiction</td>
<td>vary geographically</td>
</tr>
<tr>
<td>moving vehicles</td>
<td>moving people</td>
</tr>
<tr>
<td>vehicle trips</td>
<td>inbound vehicle miles of travel</td>
</tr>
<tr>
<td>one size fits all</td>
<td>residential by dwelling size</td>
</tr>
<tr>
<td>loose cost analysis and generous credits</td>
<td>specific improvements with a funding strategy</td>
</tr>
</tbody>
</table>

**Figure 2.** Comparison of "Old-School" and "Next-Generation" Transportation Impact Fees. Source: TischlerBise.

These next sections will describe in more detail the various ways in which old-school transportation impact fees are different from their next-generation counterparts.

**Intent**

A misconception common to elected officials, staff, and developers is that an impact fee is essentially a financial hurdle whereby the private sector "pays to play." This type of thinking is evident when there is too little concern with the fee methods and too much concern with fee amounts in other jurisdictions. From a legal perspective, an impact fee is not a tax but functions more like a contractual arrangement. In exchange for a fee payment, there is an expectation of receiving growth-related capital improvements.

Old-school transportation fees tended to be driven by generic formulas, but next-generation fees are being driven by plans and policy. In the boom periods during the 1980s, 1990s, and even up to the Great
Recession, many jurisdictions rode the sprawl wave assuming additional arterial lane miles would solve congestion problems. The pendulum has now swung towards “deliberate and decide” that realizes the importance of connecting land use and transportation decisions along with multimodal improvements to solve mobility problems (Schiller and Kenworthy 2010; Moore, Thornes, and Appleyard 2007).

**Timeframe**

Due to the legal requirement that fee-payers receive a benefit, impact fees have a time dimension. Unlike many planning products that are “one and done,” impact fees are an ongoing planning and budgeting function. We cannot simply translate a long-range vision into a build-out plan for capital improvements, with no concern for realistic market absorption rates and the timing of improvements.

In contrast to many planning products that look 20-plus years into the future, next-generation fees look out five to 10 years. For example, the State of Arizona recently amended its enabling legislation for municipalities to require development fees based on an Infrastructure Improvements Plan that is limited to 10 years.

**Spatial Thinking and Vehicle Miles of Travel**

Old-school transportation fees have a suburban worldview. This perspective is evident in trip generation rates, typically obtained from the Institute of Transportation Engineers (ITE), that are derived from traffic surveys primarily in suburban settings. A useful tool to facilitate spatial thinking is application of the transect concept during the development of next-generation transportation and mobility fees (Duany, Speck, and Lydon 2010). Just as land-use regulations and smart growth techniques need to vary by transect, so must next-generation transportation impact fees be tailored to the characteristics of the area.

In recent years, academic studies have provided extensive literature reviews and summaries of findings that document relationships between smart growth and daily travel demand (Resource Systems Group, Fehr & Peers, Cervero, Kockelman, and Renaissance Planning Group 2012). A nice framework for understanding and applying these principles are the “D” variables summarized in Figure 3 (Ewing, Greenwald, Zhang, Walters, Feldman, Cervero, Frank, and Thomas 2011). The seven variables are demographics, density, diversity, development scale, design, destination accessibility, and distance to transit.

On average, urban residential development has fewer persons and vehicles available per unit, relative to suburban residential development; thus lowering vehicular trip generation rates. Urban settings also provide options for walking, biking, and transit travel, thus lowering the vehicular mode share. Finally, mixed land use (vertical and horizontal), more compact development, and a better jobs-housing balance work together to reduce average trip lengths in urban areas. The evidence is very compelling that next-generation transportation and mobility fees must differentiate between urban and suburban areas.

![Figure 3. Graphic Summary of "D" Variables. Source: Graphic by TischlerBise](image)

The authors' consulting firm, TischlerBise, first recommended varying fees by geographic area to take into account development context in a 2002 study conducted with the Delaware Department of Transportation for the State of Delaware. The state authorized “graduated” impact fees (i.e. variable amounts by geographic area) as part of the state’s Livable Delaware Program, intended to address sprawl, congestion, and other
growth issues. The study documented average trip lengths, revealing that they varied by State Investment Strategy Areas.

Compared with trip generation rates, Vehicle Miles of Travel (VMT is equal to the number of vehicle trips multiplied by trip length, measured in miles) is a superior indicator of travel demand because it considers distance in the allocation of infrastructure costs. Development in rural areas is typically associated with longer trip lengths and higher trip generation, due to a lack of alternative modes of travel. As density and mix of development increase in urban areas, VMT decreases due to shorter trips and more walking, bicycling, and transit use. Allocating infrastructure costs by VMT is beneficial because it provides a better assessment of the demand for transportation infrastructure and it provides the rational nexus for next-generation fees that vary by geographic area. A recent example of this approach is a 2012 Mobility Fee study by Renaissance Planning Group for Kissimmee, Florida. This study demonstrated that shorter trip lengths within urban areas justified lower fees, while longer trips result in higher fees for suburban areas.

**Putting Next-Generation Impact Fees into Practice**

Based on the differences between old-school and next-generation transportation impact fees (described above), there are a number of practices that planners can use to bring their impact fees up to speed. The sections below describe various strategies that can be used to convert old-school impact fees into next-generation tools.

**Better Assessment of Need**

Old-school fees are based on moving vehicles and adding lane miles. Often, this approach is not appropriate for urban areas because intersections become the limiting factor and expansion of roads is not practical, nor desirable. Next-generation fees have a broader understanding of mobility needs requiring a combination of multimodal improvements.

In both urban and suburban areas, improvements within the right-of-way should embrace the concept of complete streets to simultaneously provide improvements for all travel modes, including walking, biking, and motorized vehicles. Transit improvements are also possible, but a couple of caveats should be considered. First, there is an important hierarchical distinction between transit facilities within the right-of-way of a street (e.g., local buses) and high-end transit improvements (e.g., bus rapid transit, light or heavy rail systems). The former fit under the complete streets framework, but high-end transit systems should undergo a separate needs analysis and have a unique cost allocation, as discussed further below.

**Better Demonstration of Benefit**

Old-school fees that derived a generic need for lane miles often fail to demonstrate how fee payers will benefit from future improvements because many local governments do not have a multi-year Capital Improvements Plan and annual capital budgets might lack consistent policy objectives. In contrast, next-generation impact fee studies should list specific improvements (e.g., "construct a roundabout at the intersection of x and y arterials"), so fee payers know what infrastructure will be built in the service area.

The prioritized list of improvements should be in locations experiencing congestion problems due to traffic flowing from a larger travel shed to choke points (conceptually like a funnel that tapers to fit into a bottleneck). Therefore, the location of system improvements is not concerned with accurately forecasting the exact location of specific development projects on the fringe of the travel shed. Improvements to arterials adjacent to specific development projects (e.g., outside travel lane, curb/gutter, and sidewalks) are usually specified in adopted design standards and considered to be project-level improvements.

**Better Allocation of Infrastructure Costs**

As described above, old-school fees allocated costs according to vehicle trips (either average weekday or PM-peak). Next-generation fees typically work best when using inbound, average-weekday VMT as the service unit. Focusing on trips destined for development within the service area simplifies fee calculations by eliminating complicated origin-destination traffic studies and fee adjustments for pass-through trips. For high-end transit improvements, such as Bus Rapid Transit (BRT) and heavy rail systems, a better cost-allocation methodology than VMT is to simply use persons and jobs located within the service area. For example, the City of Tempe, Arizona, is currently considering a possible development fee that might provide partial funding for a new streetcar line, with the growth share of planned improvements allocated to persons and jobs in the service area (primarily downtown Tempe and the Arizona State University campus). As shown in Figure 4, work commute trips are a major component of morning and afternoon peak travel demand, and
work trips tend to be longer than other types of trips. Next-generation impact fees in urban areas should allocate high-end transit costs to persons and jobs because the movement of people from their place of residence to their place of work is being accomplished by walking, biking, and transit systems, instead of private vehicles.

Figure 4. Start Times for Trips by Purpose. Source: Our Nation’s Highways, U.S. Department of Transportation, 2010.

**Better Proportionality for Residential Fees**

Impact fees must be proportionate to the demand for infrastructure; thus, a critical first step is documenting demand units or service units per development unit. Because the average number of persons and vehicles available per dwelling unit has a strong and positive correlation to the number of bedrooms per unit, next-generation impact fees should include residential fee schedules that correlate the fee to dwelling size, with larger units charged higher fees. An old-school average fee for all types and sizes of residential development is not proportionate; further, this approach makes small units less affordable, while essentially subsidizing larger units (Nelson, Bowles, Juergensmeyer, and Nicholas 2008).

Rather than use national or state multipliers, custom tabulations of demographic data by bedroom range can be created from individual survey responses provided by the U.S. Census Bureau, in files known as Public Use Microdata Samples (PUMS). PUMS files, for areas of at least 100,000 persons, can be downloaded from the American Community Survey website. Recent data sets are based on 2010 census geography and enable large metropolitan areas to differentiate urban and suburban service areas, but small communities will be limited to demographic characteristics of the entire Public Use Microdata Area.

An example from a recent TischlerBise study for Roswell, Georgia, will help to illustrate the technique of allocating infrastructure costs based on house size. As shown below, trip generation rates and average persons per housing unit by bedroom range were derived from unweighted PUMS data. Input variables are the three columns highlighted with yellow shading (i.e., persons, vehicles available, and housing units). Footnote 2 provides the formula for deriving trip ends from persons. Footnote 3 provides the formula for deriving trip ends based on vehicles available. Average trip ends from both approaches are divided by housing units to yield the recommended multipliers (i.e., trip ends per housing unit by bedroom range). The recommended multipliers by bedroom range are for all types of housing units, adjusted to control totals for Roswell.
Next-generation fees based on size of dwelling are generally easier to administer when expressed in square feet of finished living space for all types of housing. Basing fees on square footage rather than the number of bedrooms eliminates the need for criteria to make administrative decisions on whether a room qualifies as a bedroom. To translate dwelling size by number of bedrooms into square footage, data on the floor area of dwellings can often be obtained from local sources, like the local government’s GIS or a parcel database used for property tax assessments. At the census division level, the U.S. Census Bureau’s 2013 Survey of Construction microdata is a good source to obtain the average size of single-family units (both detached and attached) by bedroom range. The Census Bureau also publishes summary tables on the size of multifamily housing units constructed in 2013 by census region.

To continue with the Roswell example, demographic data derived from U.S. Census Bureau PUMS files was combined with floor area averages obtained from Roswell building permits (3 and 4+ bedroom units) and Census Bureau construction surveys (0-1 and 2 bedroom units). Average floor area and weekday vehicle trip ends, by bedroom range, are plotted in the graph below, with a logarithmic trend line derived from four actual averages for the area that includes Roswell. The trend line formula was then used to derive estimated trip ends by dwelling unit size, in 500-square-foot intervals. The average-size three-bedroom unit has a fitted-curve value of 8.65 vehicle trip ends on an average weekday. In comparison, a very small dwelling (1,000 square feet or less) has a fitted-curve value of 4.26 trip ends and would pay 49 percent of the transportation impact fee paid by an average-size unit. At the other end of the spectrum, a large unit (4,001 square feet or more) with a value of 9.54 trip ends would pay 110 percent of the transportation impact fee paid by an average size unit.

<table>
<thead>
<tr>
<th>Bedrooms</th>
<th>Persons (1)</th>
<th>Trip Ends (2)</th>
<th>Vehicles Available (1)</th>
<th>Trip Ends (3)</th>
<th>Average Trip Ends</th>
<th>Housing Units (1)</th>
<th>Trip Ends per Housing Unit</th>
<th>Persons per Housing Unit</th>
<th>Housing Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1</td>
<td>47</td>
<td>162</td>
<td>31</td>
<td>186</td>
<td>174</td>
<td>31</td>
<td>5.12</td>
<td>1.58</td>
<td>6%</td>
</tr>
<tr>
<td>2</td>
<td>188</td>
<td>571</td>
<td>128</td>
<td>755</td>
<td>663</td>
<td>108</td>
<td>5.61</td>
<td>1.81</td>
<td>22%</td>
</tr>
<tr>
<td>3</td>
<td>291</td>
<td>850</td>
<td>247</td>
<td>1,448</td>
<td>1,149</td>
<td>133</td>
<td>7.89</td>
<td>2.28</td>
<td>27%</td>
</tr>
<tr>
<td>4+</td>
<td>666</td>
<td>1,805</td>
<td>499</td>
<td>2,905</td>
<td>2,355</td>
<td>221</td>
<td>9.74</td>
<td>3.14</td>
<td>45%</td>
</tr>
<tr>
<td>Total</td>
<td>1,192</td>
<td>3,388</td>
<td>905</td>
<td>5,295</td>
<td>4,342</td>
<td>493</td>
<td>8.05</td>
<td>2.52</td>
<td>38%</td>
</tr>
</tbody>
</table>

(1) American Community Survey, Public Use Microdata Sample for GA PUMA 1005 (2012 1-Year unweighted data).
(2) Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is \( EXP(0.91*LN(persons)+1.52) \). To approximate the average population in the ITE studies, persons were divided by 2 and the equation result multiplied by 2.
(3) Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2012). For single unit housing (ITE 210), the fitted curve equation is \( EXP(0.99*LN(vehicles)+1.81) \). To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 4 and the equation result multiplied by 4.
(4) Recommended multipliers are scaled to make the average values for PUMA 1005 match the average values for Roswell, derived from American Community Survey 2012, 1-Year data.

Figure 5. Example of Residential Service Units by Bedroom Range, Roswell, Georgia. Source: TischlerBise.
It is important to note that the proposed fees by dwelling size do not increase in a linear manner. In other words, a unit in the largest size range (4,001 or more square feet) would pay a fee that is only roughly twice as much as a unit in the smallest size range (1,000 square feet or less), even though the floor area is at least four times larger. Some older impact fee studies simply recommended an average fee per square foot of dwelling. However, a dwelling with 6,000 square feet of living space is not likely to have six times the number of vehicle trips as a dwelling with 1,000 square feet of living space. This is an important consideration to avoid overcharging fees.

### Specific Improvements and Funding Strategy

The "need" for transportation system improvements (e.g., additional arterial lane miles, roundabouts, or traffic signals) is more difficult to determine than improvements to utility systems. The key difference is that water and sewer utilities are closed systems, but a street network is an open system. The demand for street capacity can be influenced by development units outside the service area and by what is known as "triple convergence" (Downs 1992). In essence, this concept acknowledges that transportation capacity is consumed by drivers changing their time, route, and mode of travel, with the latter being more significant in urban areas. Also, "traffic congestion" is a relative and more subjective measure that is closely linked to the concept of "willingness to pay." In other words, planners should be asking, "What improvements are we willing to fund?" rather than compiling wish lists of what people want without any consideration of fiscal realities.

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**Figure 6.** Example of Trip Ends by Residential Floor Area. Source: TischlerBise.
Given this complexity, communities should embrace the willingness-to-pay concept and strive to agree on a list of multimodal improvements that translates into fees deemed appropriate for their communities. If officials, with input from staff and stakeholders, determine the proposed fees are too high, lower-priority projects can be deleted, or the growth share to be funded by impact fees can be reduced, assuming additional funding is available from other revenue sources. An example of using other revenue sources to reduce fees is the recent update to Pasco County's Mobility Fees (Tindle-Oliver & Associates 2014).

To ensure planned improvements are financially feasible, it is a good idea to compare projected annual impact fee revenue to the timing of planned expenditures, which is commonly known as a cash flow analysis. Also, a good quality control measure is to compare cumulative impact fee revenue over the planning horizon to the growth cost of planned improvements. If revenues and expenditures vary significantly, there might be a problem in the analysis that warrants additional work.

**Incorporating Credits in Impact Fee Calculations**

Regardless of the methodology used, a consideration of "credits," or possible fee reductions, is integral to the development of next-generation impact fees. There are two types of "credits" with specific characteristics, both of which should be addressed in next-generation fee studies and ordinances.

The first is a site-specific credit, or developer reimbursement, for dedication of land or construction of a system improvement that was included in the fee calculations. This type of credit is addressed in the administration and implementation of the impact fee program. If a developer constructs a system improvement included in the fee calculations, it will be necessary to either reimburse the developer or provide a credit to reduce the fees for that particular development. The latter option is more difficult to administer because it creates unique fees for specific geographic areas. It is usually better for a jurisdiction to establish a reimbursement agreement with the developer that constructs a system improvement. The reimbursement agreement should be limited to a payback period of no more than 10 years and the jurisdiction should not pay interest on the outstanding balance. The developer must provide sufficient documentation of the actual cost incurred for the system improvement. The jurisdiction should only agree to pay the lesser of the actual construction cost or the estimated cost used in the fee analysis. Reimbursement agreements should only obligate a jurisdiction to reimburse developers annually from actual fee collections in the service area. The reimbursement percentage for a particular improvement can be derived from the list of transportation improvements used to derive the fee schedule (discussed above). Project-level improvements, such as turn lanes for safe access to a residential subdivision, are specified as part of the development approval process and are not eligible for credits against impact fees.

The second type of credit is due to possible double-payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure funded by the impact fee. This revenue credit is integrated into the impact fee calculation, thus reducing the fee amount. Because old-school fees tended to be driven by generic formulas, the cost analysis was often generalized and included contingencies. To help avoid legal challenges, it was common to provide generous adjustments to compensate for the loose cost analysis. The most common was the gas tax credit often found in old-school fee calculations. Gas tax revenue has been declining over time, especially when expressed in constant dollars and normalized to account for the increase in population and jobs. Because most jurisdictions are struggling just to maintain their existing network of streets with decreasing gas tax revenue, jurisdictions can acknowledge the fiscal reality that gas tax revenue will not be used to expand capacity of roadways. Therefore, the gas tax credit is probably no longer applicable to next-generation fees in most jurisdictions.

**Next Steps for Planners**

This PAS Memo has discussed a number of elements that planners should consider in evaluating their current impact fees to determine whether they are encouraging the type of development desired by their jurisdictions. These actions are summarized below along with practical suggestions to help local governments transition to next-generation impact fees.

1. Consider broader mobility needs and multimodal infrastructure when determining what improvements may be funded by impact fees.
2. Adopt "complete streets" policies and design standards to codify the need to provide improvements for all travel modes.
3. List specific capital improvements so fee payers can evaluate the benefit from infrastructure to be built in the service area.
• Consider allocating the growth share of arterial street improvements to inbound, average-weekday VMT, rather than simply using vehicle trip ends.
• For high-end transit improvements, allocate costs to persons and jobs located within the service area.
• Establish residential fee schedules by dwelling size (typically measured by square feet of finished living space).
• Embrace the willingness-to-pay concept and propose a level of improvements that translates into multi-modal fees deemed appropriate for your community.
• Vary fees by urban and suburban service areas.
• Set up a liaison group of developers and builders to get input on market assumptions and quantitative inputs like local costs.
• Avoid stumbling blocks and pitfalls, like rolling out the updated fees prior to an upcoming local election.
• Work with champions among staff, elected officials, and business leaders.

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