RIGHT-OF-WAY PRESERVATION POLICIES,
ACTIVITIES AND STRATEGIES

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INTRODUCTION

Passage of the Intermodal Surface Transportation Efficiency Act of 1991 and corresponding requirements in Florida ISTEA established stronger policy support for corridor preservation on a state and federal level. In 1995, the legislature enacted additional corridor preservation legislation. As a result, the Florida Department of Transportation and local governments are now re-evaluating and strengthening their approach to right-of-way acquisition and corridor preservation.

According to the American Association of State Highway and Transportation Officials, corridor preservation is "...the coordinated application of various measures to obtain control or otherwise protect the right-of-way for a planned transportation facility. Corridor preservation techniques should be applied as early as possible after the transportation corridor is identified either along a new alignment, or along an existing facility..." A comprehensive corridor preservation program also includes the application of access management techniques to promote appropriate and well-designed access systems that will provide reasonable access to land development, while preserving the level of service of the corridor in terms of safety, capacity, and speed of travel.

The NCHRP Synthesis 197, Corridor Preservation: A Synthesis of Highway Practice, goals of corridor preservation include:

- preventing inconsistent development,
- minimizing environmental, social and economic impacts,
- reducing displacement,
- preventing the foreclosure of desirable location options, and
- permitting orderly project development, and reducing costs.¹

By enacting corridor preservation techniques, local governments may avoid unnecessary damage to homes and businesses. Inconsistent development within and along future corridors can be reduced as well, thereby avoiding the need to relocate corridors into more environmentally sensitive areas. Figure 1, on page six, illustrates other problems that can arise if development is not adequately managed along major corridors, such as building setback non-conformities, parking non-conformities, and damage to storm water retention facilities.

Inadequate management of corridor right-of-way needs has also caused right-of-way to consume a growing proportion of the highway construction budget. A Florida Senate report issued in 1988, indicated that then right-of-way costs varied from about $100,000 per mile in rural areas of northern Florida to as high as $77 million per mile in some urbanized areas of Southeast Florida.² The FDOT Office of Policy Planning reports that over the past 10 years, right-of-way costs have ranged from as low as 14% of construction programs to more than 40%.³

LEGISLATIVE AND POLICY FRAMEWORK

1995 Legislative Changes

In 1995, the Florida legislature amended the state’s transportation planning legislation (Chapter 337, F.S.), as well as the growth management act (Chapter 163, F.S.), by adding new language related to corridor
preservation. Chapter 337.273, F.S. states “investments in transportation corridors cannot be adequately coordinated with land-use decisions without timely preservation, management, or acquisition of property.” Additionally, amendments to Chapter 337.273, F.S. stress that corridor preservation is a necessary component of the continued economic health, safety, and welfare of the public. Accordingly, failure to adequately preserve or acquire property necessary to accommodate transportation facilities presents a public liability and seriously impedes the ability to plan for future growth. To carry out these provisions, the legislation allows the Florida Department of Transportation to acquire any right-of-way within a designated transportation corridor at any time, but only where it is in the public interest to protect the corridor from development or when the corridor designation creates an undue hardship on the property owner.

The amendments authorize local governments to adopt transportation management ordinances to manage high priority corridors. The changes to Chapter 163.3177, F.S. allow local governments to designate future transportation corridors (for the purposes of preservation), in the traffic circulation element of the local comprehensive plan. If a designated corridor includes a facility on the State Highway System, the local government is responsible for notifying the Florida Department of Transportation before approving any zoning or subdivision plat change, or before issuing any building or development permits for a use within the corridor which could substantially impair the corridor’s future viability. This requirement does not apply to routine maintenance or emergency repairs to structures. When the Department is notified of pending development approval, it will determine whether to purchase the affected property or to initiate eminent domain proceedings.

The legislation also raises new questions. For example, what constitutes a substantial change was not defined. Also, although the legislation “requires” the notification process, it does not hold the local government liable for failing to notify the Department of the described land use changes. To resolve this confusion, it has been suggested that the FDOT be notified of all land use changes within the designated corridors. This issue is among several currently being considered by the FDOT Corridor Management Task Force, which was established by the FDOT Office of Policy Planning.

Local Transportation Management Ordinances

The changes to Chapter 163.3164 (30), F.S. define transportation corridor management as, “the coordination of the planning of designated future transportation corridors with land-use planning within and adjacent to the corridor to promote orderly growth, to meet the concurrency requirements of this chapter, and to maintain the integrity of the corridor for transportation purposes.” It is recommended that any transportation management ordinance include the following:

- **Criteria to manage the land uses within and adjacent to the corridor.** This is to include a clear delineation of which land use management techniques are appropriate for use within the corridor, such as: setback limits, overlay provisions, or cluster zoning. Although not specified in statute, local governments should also consider techniques for managing access along the corridor as part of a comprehensive corridor management strategy.

- **Restrictions on residential and nonresidential construction.** The ordinance should clearly delineate the types of residential and nonresidential uses which will be proscribed within the corridor, and strive to minimize high-intensity uses to the extent reasonable.
Identification of permitted uses within the corridor. The ordinance should also identify those uses which will be allowed within the corridor. This may include allowances for interim uses to mitigate

Figure 1 - Well-planned corridors will minimize problems with building setback non-conformities and parking non-conformities.

the impacts of a property reservation upon a property owner - such as parking or storm water retention - until the property is actually needed for construction.

A public notification process. The transportation management ordinance should include a procedure for notifying affected property owners of the corridor designation, and for notifying the Florida Department of Transportation of any rezoning, building permits, subdivision changes, or other permitting activities which would substantially impair the future viability of the corridor.

A process for intergovernmental coordination. This provision will help local governments better manage corridors and facilities which cross jurisdictional boundaries.
FDOT Corridor Management and Monitoring Procedure

Chapter 337, F.S., *Contracting: Acquisition, Disposal, and Use of Property*, provided FDOT with statutory authority to designate priority corridors by designating the roadways in the Florida Transportation Plan (FTP). The Department was also vested with powers of eminent domain for designated corridors. In 1988, the Florida Legislature amended Chapter 337, F.S., establishing a corridor designation process and setting forth the criteria for the advance purchase of right-of-way. The new 1995 legislative changes amended this process somewhat, shifting from "corridor protection," to "corridor management." The emphasis is now on managing the corridors with allowances for compatible land uses within or adjacent to the designated corridors, as opposed to emphasizing a strict limitation on all development.

Also, the designation of corridors within the Florida Transportation Plan is no longer a specific provision of Chapter 337. Rather, the Department has shifted its focus to working with the local governments, recommending designation of corridors in local comprehensive plans, consistent with the state’s growth management principles. The basis for this change is a recognition that local governments have greater legal authority than the State to manage the land development process. As stated in the FDOT Corridor Directive: "The imposition of land use controls by a local government to ensure the adequate provision of land needed for future transportation facilities has been found to be a legitimate exercise of the local government’s police powers under Florida law."

To carry out the legislative changes, the Florida Department of Transportation (FDOT) has adopted a Corridor Management Directive that provides the Department with a clear set of guidelines to effectively manage high priority corridors. FDOT is also developing a training program for its District offices and local governments aimed at encouraging the adoption of local corridor management ordinances.

The Corridor Management Directive provides for:

- **Preparation of a Corridor Management Report.** This report, completed by each District, serves to identify high-priority corridors within each District and document the need for the corridors to be included on the Department’s Corridor Management List. The report also provides the justification for the local government’s designation of a given corridor within the comprehensive plan. It is a prerequisite for designation on the Corridor Management List.

- **Development of District Corridor Management Lists.** These lists, based on approved Corridor Management Reports, allow the Districts to prioritize projects and begin development of District work programs.

- **Fulfillment of requirements for advance ROW acquisition.** By designating corridors on the Corridor Management List, and developing the priority work program, the Districts may begin to conduct early Project Development & Environmental (PD & E) studies. The early initiation of these studies maximizes the opportunities for advance acquisition of right-of-way, including:

  - **Project Acquisition - eminent domain proceedings may be initiated along a corridor if the PD & E report is completed and right-of-way acquisition is scheduled;**
Parcel Acquisition - if enough information has been collected (in a corridor management report, or other comparable document) to approve an acquisition along the corridor, negotiations may begin to acquire individual parcels. This method is usually only possible on projects which are not federally funded, as it does not require a completed PD&E study.

- Monitoring of land development activity. The purpose of monitoring land development activities within and along the corridors on the Corridor Management List is to allow the Department to take the necessary measures to preserve the functional integrity of the corridor. This may include the methods of acquisition described above.

CORRIDOR PRESERVATION TECHNIQUES

The following describes commonly practiced corridor preservation techniques. These tools are used to acquire or reserve right-of-way for a future transportation facility or to widen an existing facility.

Property Acquisition

Options to Purchase. A state or local agency may establish an option to purchase future right-of-way. Also known as a “first right of refusal” clause, this enables the governing unit the first right to acquire mapped rights-of-way where the owner intends to build or sell. The agency must decide within a specified period of time, usually 30, 60, or 90 days. Another variation is to enter into a written agreement with a property owner which stipulates that the property owner cannot develop the area until the option expires. In this way, the state or local agency need not obtain full fee ownership of the property during the option period, and the property also remains on the tax rolls.6

Purchase of Development Rights. When an agency purchases development rights, a development easement is placed on the property which removes development rights but does not involve fee simple acquisition. Property owners may typically farm the land or use it for nondevelopment purposes. The benefits of this method include the ability to preclude development and avoid a regulatory taking, while not incurring the higher costs of fee simple purchase of the property. The property also remains on the tax rolls and owners may continue any current use.

Planning & Regulation

State and local agencies have found it increasingly difficult to fund corridor acquisition far in advance of project construction. The lag time between corridor planning and property acquisition can result in much higher right-of-way cost due to increased development within and along the corridor. Planning and regulatory techniques can be employed to manage development along a future corridor until funds become available for acquisition. These techniques curb the escalation of right-of-way costs until money is programmed for acquisition.

Thoroughfare Plans and Maps of Reservation. In Florida, the Traffic Circulation Element of the adopted Comprehensive Plan must include “the types, locations, and extent of existing and proposed major thoroughfares and transportation routes.”7 As explained in chapter 9J-5 of the Florida Administrative Code, part of this element requires that a Future Traffic Circulation Map be developed which depicts the future
collector, arterial, and limited access roadways, and identifies the proposed number of lanes for each road. To portray these future needs, local comprehensive plans include a future rights-of-way needs plan. This plan is the foundation for a Thoroughfare Plan Map (or official map), which denotes the location and right-of-way width of a proposed transportation corridor. Once a thoroughfare plan map is established, local governments can manage development along the corridor through regulations aimed at minimizing development within the corridor.

**Reservation.** In the context of corridor management, reservation involves the use of regulations and negotiation to reserve right-of-way for a future corridor. This differs from dedications and exactions in that the land is not acquired by the public agency until the project nears construction.

**Dedications and Exactions.** Payments or contributions of land may be exacted from an applicant by a government agency as a condition of development approval. Exactions may be monetary or involve land or other contributions to the public. For example, a property owner may be required to dedicate land in the future right-of-way along a designated corridor as a condition of development approval. There are constitutional limitations on public use of this approach. Required dedications must be related both in nature and extent (i.e., roughly proportional) to the impact of the proposed development, in this case, on the transportation network. Dedications may also occur on a voluntary basis.

**Building Setbacks.** A building's location on a property is determined by the setback requirements of a zoning district. Setback requirements are mainly used to promote safety and urban design but can also protect future right-of-way (see figure 2). Local governments can either increase their required setback from the existing right-of-way line or require the setback be measured from the future right-of-way line. Setbacks are most effective where the centerline of a facility is known or can be reasonably estimated. To offset the uncertainty as to the location of a new or proposed alignment, some communities use "clear zones" in combination with setbacks (see for example, Pasco County, Maricopa County in the description of local practices). Legal experts advise caution, however, in application of setbacks for right-of-way reservation. Says Attorney Daniel Mandelker, "Most courts that have addressed the issue have held unconstitutional the use of building setback ordinances to acquire or reserve land for the construction or widening of streets." For this reason, local governments should supplement setback requirements with mitigation measures, as well as short periods of reservation (see Legal Considerations.)
**SETBACK LINES**

Figure 2: Building setbacks are established through zoning and are a fundamental tool for corridor management.

**Interim Uses.** Local governments may allow interim uses to occur within a reserved corridor until the property is needed for the transportation facility. Generally, interim uses have a relatively low investment in structural improvements to the site. Such uses may include storm water retention, overflow parking areas, signage, gate-houses, and nurseries.

**Table 1: Corridor Preservation Techniques**

<table>
<thead>
<tr>
<th>Property Acquisition</th>
<th>Planning &amp; Regulation</th>
<th>Mitigation Measures</th>
<th>Collaborative Approaches</th>
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<tr>
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<td>- Informal Negotiations</td>
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<tr>
<td>- Purchase of Development Rights</td>
<td>- Dedications &amp; Exactions</td>
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<td>- Intergovernmental Coordination</td>
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<td>- Option to Purchase</td>
<td>- Building Setbacks</td>
<td>- Impact Fee Credits</td>
<td>- Public Involvement</td>
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<td>- Interim Uses</td>
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<td>- Access Management</td>
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<td>- Overlay Zones</td>
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<td>- Downzoning</td>
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**Access Management.** Access management involves establishing a logical, functional hierarchy of roadways and reinforcing that hierarchy by applying various levels of access control. The greatest level of access control should be applied to major thoroughfares, the primary function of which is movement of people and goods. The least access control should be applied to local streets which primarily function to provide access
to land development. Access management techniques help preserve the safety and capacity of corridors by removing turning vehicles from through-traffic lanes and otherwise minimizing the potential for vehicular conflicts or crashes. This is achieved through a variety of techniques addressing issues such as driveway location and design, improved on-site circulation systems, service or shared access drives, corner clearance, turn lanes, signal spacing, medians, and spacing of median openings. Advance planning related to access systems and right-of-way needs furthers the orderly layout and use of land, enhances community character, avoids damage to homes and businesses, and protects the substantial public investment in the roadway network.

**Overlay Zones.** A Corridor Management Overlay works in conjunction with a local government’s zoning regulations. The overlay district imposes special development regulations on areas near future transportation corridors. The affected areas are identified on the Future Transportation Map within the Comprehensive Plan and the zoning map. The corridor overlay suggested in the Florida Department of Transportation model corridor management ordinance, includes provisions for transfer of density and intensity, stricter setback requirements, and site plan review guidelines for projects within 1,000 feet of a future transportation corridor. Another alternative would be establishing a Planned Unit Development (PUD) or flexible zoning overlay along designated corridors to allow increased flexibility of site design and clustering of units, thereby increasing opportunities to develop the site without disturbing the future corridor.

**Downzoning.** As an alternative to denying all development within a future right-of-way, local governments may rezone the land in and around the corridor for a less intensive or lower density of use. Often, local governments apply agricultural zoning or low density residential zoning for this purpose.

**Mitigation Measures**

The following section describes some mitigation measures that can be employed by local governments to offset hardships imposed upon individual properties as a result of a corridor management ordinance. These include a variance procedure, transfer of development rights, relaxing zoning requirements, impact fee credits, and property tax break provisions.

**Variance Procedure.** Corridor management ordinances should provide some administrative procedure for reviewing requests to develop within the right-of-way. A tiered process could be provided with a certain level of flexibility allowed through administrative approval. This provides an opportunity to avoid instances where the regulatory program could be conceived as a taking. Nonetheless, variances should not be granted until every option for avoiding the right-of-way has been pursued and deemed impractical. Below are additional measures that may be applied in an effort to achieve resolution of potential hardship.

**On-site Transfer of Development Rights.** Transfer of development rights involves the transfer of a right to develop, from one area to another. For corridor management, local governments may provide for an on-site density transfer from that portion of property reserved or dedicated for future right-of-way to the remainder of the property.

**Relaxed Zoning.** Land development regulations prescribe a building envelope for property through requirements that lots meet specified dimensions, impervious surface ratios, parking requirements and other standards. In some cases, relaxing these requirements somewhat can ameliorate constraints on a development site caused by the reservation or dedication of future right-of-way. In other words, this allows
for development of what otherwise might be a nonconforming site, or it provides some leeway in achieving a site design that avoids the future right-of-way. Nonetheless, this option should only be afforded to properties which are constrained due to inadequate lot dimensions. Instances where this might be applied, include exceptionally shallow lots.

**Impact Fee Credits.** An impact fee is based on the number of new trips added to the transportation network. The value of the future right-of-way being dedicated or reserved is credited against the fees. Through an impact fee credit process, local governments can combine collecting the fee and purchasing the right-of-way into one transaction.

**Tax Abatement.** Some areas have used tax abatements as a financial incentive for dedication of future right-of-way. When calculating property values for taxation purposes, the value of the reserved property would be deducted from the total amount of assessed value (see for example, Models and Case Studies: Otay Mesa.) Thus, the property owner does not pay taxes on property within the right-of-way that is not available for development. However, use of this technique in Florida will likely require new legislation.

**Collaborative Approaches**

**Informal Negotiations.** One of the most effective methods of protecting future corridors is through informal negotiations with developers and property owners that share the corridor. The negotiations may occur at the time of corridor designation, through special meetings and public involvement techniques. Developers who participated in a focus group on corridor preservation techniques indicated that "the key to successful protection of future rights-of-way and the expansion of existing rights-of-way was advanced planning of corridor locations, early negotiations with land owners and involvement of both local government and FDOT in the process." Negotiations may also occur during the site plan review process where local governments and developers can compromise on the location of structures, parking, and, in some cases, the future alignment of the corridor.

**Intergovernmental Coordination.** There is a need for intergovernmental agreements among local governments, because designated corridors may cover several jurisdictions. In addition, greater collaboration is required between FDOT Districts and local governments on managing future corridors. According to a study of corridor preservation techniques conducted by Henigar and Ray for the FDOT, "The development of partnerships between FDOT and local governments and a cooperative planning process are absolutely necessary if improvements in the preservation and protection of future rights-of-way is expected."

**Public Involvement.** Local governments should engage in special meetings or workshops to inform property owners of the corridor designation process and to involve community leaders and interest groups in these decisions. This will help increase public awareness of the importance of the corridor and the benefits of corridor management. It will also inform affected persons as to how the state and local governments involved plan to alleviate individual hardships posed by the regulatory framework. People are much more likely to accept a corridor management program as a necessary hardship, if they have been fully informed and treated fairly in the decision making process.
LOCAL RIGHT-OF-WAY RESERVATION PRACTICES

Hernando County

The Metropolitan Planning Organization’s Long Range Plan identifies considerable future rights-of-way needs in Hernando County along the Florida Turnpike and along state roads, but fewer right-of-way needs on the County road system. In only a few areas has the County acquired land for future corridors. Hernando County has historically pursued dedication and preservation of future rights-of-way; this practice has been most aggressive along US 19 and SR 50. According to the Hernando County Metropolitan Planning Organization, most future right-of-way dedications occur on a strictly voluntary basis, although this does not occur as frequently as the County would desire.

In 1986, Hernando County adopted an ordinance to implement a system of frontage roads along major highways. The purpose of the ordinance was to reduce curb cuts along major arterials, separate local traffic from through traffic, and thereby improve the safety and efficiency of travel on the arterial system.

The ordinance applies to US 301, US 98, US 41, US 19, CR 485, and SR 50. Developers of property adjacent to these highways are required to provide (at their expense) a frontage road from property line to property line parallel to the highway, upon demonstration of need and demand by the County. This requirement applies to any development that would increase the traffic demand upon the arterial system by more than 10 Average Daily Trips (ADT), either by constructing a new building, expanding the capacity of an existing building, changing an existing use, or subdividing property to create additional buildable lots.

The developer is responsible for paying for the engineering and construction of the frontage roads to County specifications, as well as maintaining the frontage road to County standards. Exception to the maintenance requirement may be made if the property owner contracts with the County to maintain the roadway or dedicates the roadway and the right-of-way to the County for inclusion into the County roadway maintenance system. County specifications call for a two lane frontage road (see Appendix A). County engineers strongly recommend that frontage road connections be set back at least 75 ft. from intersections and up to 125 ft., if feasible; in some cases, a 325 foot separation has been achieved. This separation distance is not always achieved due to inadequate lot dimensions or development constraints. According to the County, the 125 ft. distance is reached approximately 75% of the time. Newer developments tend to meet the 125 ft. recommendation.

The frontage road ordinance authorized the Board of County Commissioners to form an enforcement agency to issue permits and conduct inspections on the property to ensure compliance with this ordinance and, if necessary, initiate legal action if compliance is not reached. If the enforcing agency makes a determination that a person, firm, or corporation must construct and finance a frontage road, the developer has thirty (30) days to make an appeal before the Board of County Commissioners.

To date, portions of the frontage road have been built along SR 50 and US 19. Hernando County struggles with efforts to maintain a continuous system of frontage roads along some of its major arterials. Where development is sporadic, as is true of many of the County’s highways, land is not dedicated for frontage roads, and many of the frontage roads dead-end without any connection to the overall road network.
Recommendations for Hernando County

Frontage roads can be a useful tool for eliminating driveway connections along high-speed arterials, and to thereby separate local, residential traffic and high-speed through-traffic. Despite the advantages of frontage roads, they are also associated with certain operational problems. Frontage roads tend to increase the number of conflict points where the frontage road connects with a cross road, thereby increasing the potential for automobile or pedestrian accidents. They can also increase the number of possible crossing and turning movements onto and off an arterial. These potential impacts are even greater with two-way frontage roads, and higher traffic volumes associated with commercial and higher density residential areas.

The operational problems associated with frontage roads can be overcome through careful attention to design and placement of the road. Below are some considerations in managing the impacts of frontage roads on traffic operations.

✓ Avoid frontage road connections within the functional area of an intersection. This can be accomplished by “belling out” the frontage road to increase the separation between the frontage road connection and the intersection. According to AASHTO, “Traffic operations are improved if the frontage roads are located a considerable distance from the main line at the intersecting cross roads in order to lengthen the spacing between successive intersections along the crossroads.”¹ AASHTO suggests a minimum separation of 150 feet in urban areas and 300 feet in rural areas. However, a recent study by the NCHRP indicates the distance should be a minimum of 300 feet:

“The spacings of at least 300 feet (preferably more) enable turning movements to be made from the main lanes onto the frontage roads without seriously disrupting arterial traffic and, thereby minimize the potential of wrong-way entry onto the through lanes of the predominant highway.”

✓ Increasing the separation is especially important in areas intended for commercial development, or locations where the frontage road and arterial are heavily traveled. In areas with light density and/or traffic volumes, left turns can be allowed, but with an appropriate separation distance from the intersection.

✓ A reduction in conflicts at the intersection could also be achieved by restricting left turns into and out of the frontage road. In other words, the system could be designed to allow right-in and right-out movements only.

✓ Consider a shift from two-way frontage roads to one-way frontage roads. According to AASHTO:

“From an operational and safety standpoint, one-way frontage roads are much preferred to two-way. One-way operation inconveniences local traffic to some degree, but the advantages in reduction in vehicular and pedestrian conflicts at intersecting streets often fully compensate for this inconvenience.”²

¹ AASHTO: A Policy on Geometric Design of Highways and Streets, p. 371

² AASHTO: A Policy on Geometric Design of Highways and Streets, p. 371
Maintain the outer separation, or strip of land between the frontage road and the future right-of-way line. The National Highway Institute recommends a distance of at least eight feet for pedestrian refuge and landscaping. Other experts recommend a minimum outer separation of 20 feet.

Consider a system of joint and cross access, where frontage roads prove impractical. For further information on joint and cross access drives, refer to the Model Land Development Regulations that Support Access Management.

Provide for administrative approval of variances from setback or lot dimensional requirements where needed to achieve right-of-way reservation objectives. This helps streamline the approval procedures for property owners, by avoiding the lengthy, formal variance review process.

Adopt minimum right-of-way requirements for the future transportation network and a corridor management ordinance (see also General Recommendations).

Pasco County

Pasco County has integrated right-of-way protection requirements into their Comprehensive Plan and Land Development Code. Roadways are classified and mapped according to function in the Pasco County Comprehensive Plan 2010 Roadway Network. This allows for regulation of access, street and right-of-way widths, circulation patterns, design speed, and construction standards. Pasco County's Traffic Circulation Element requires the adoption of a Right-of-Way Protection Ordinance and Rights-of-Way Reservation Ordinance and Map that identifies the right-of-way necessary to develop the planned future roadway network.

Protected areas include “required right-of-way on either side of the centerline of an existing or planned roadway and/or required right-of-way for roadway or other transportation corridors for which no centerline has been established.” In the event a centerline has not been established, the new facility’s location is determined during the site plan review process. The stated purpose of these provisions is to ensure compliance with long-range level of service standards.

The Rights-of-Way Reservation Ordinance and Map prohibits the development of structures or parking within the planned right-of-way and “provide(s) for the dedication or acquisition of the reserved right-of-way upon issuance of a development order.” Targeted properties include those encompassing future right-of-way designated for improvement within the five year capital improvement program. The County can reserve these areas for five years. However, the Board of County Commissioners can extend this period for up to an additional five years.

The goals, policies, and objectives regarding right-of-way preservation are implemented through clear zone requirements in the Pasco County Land Development Code. The ultimate right-of-way width for roadways

3 National Highway Institute Course No. 15255: Access Management, Location and Design, p. 5-12

classified in the 2010 Future Traffic Circulation Map is established in the Code and varies in width from 300 feet for an expressway to 100 feet for a minor collector (see Table 2). These rights-of-way (or those identified through engineering studies) are designated as clear zones, with the centerline of each corridor established at one-half the required right-of-way.

Table 2: Pasco County clear zone requirements.

<table>
<thead>
<tr>
<th>Functional Classification</th>
<th>Required Right-of-Way (ft.)†</th>
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<tbody>
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<td>Expressway</td>
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<td>Minor Collector</td>
<td>100</td>
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</table>

† Building setbacks are established in zoning and measured from the established clear zone line.

Structures are prohibited within clear zone areas and building setbacks established in the respective zoning district must be measured from the designated clear zone line. Interim uses may be allowed within the clear zone as follows: on-site signs, on-site storm water retention facilities, landscaping and buffering, and parking facilities provided the minimum required parking cannot be accommodated without placing spaces within the clear zone.

Pasco County subdivision regulations establish minimum right-of-way requirements for local streets not functionally classified in the county comprehensive plan. The right-of-way requirements for these streets vary by street type (residential units served) and whether the area is urban or rural, and may be modified subject to preliminary plan approval (see Table 3).

Discretionary standards also require such streets to provide sufficient right-of-way to:

1) Allow development of the full cross section including medians and roadside clear zones.
2) Provide for the layout of intersections and access points.
3) Allow for sight distances at all points, particularly on horizontal curves, at intersections, and other access points.
4) Provide space for placement of pedestrian and bicycle facilities.
Table 3: Pasco County minimum right-of-way for subdivision streets.

<table>
<thead>
<tr>
<th>Street Type</th>
<th>Required Right-of-Way (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td>1A (601+ equiv. units)</td>
<td>100</td>
</tr>
<tr>
<td>1B (201-600 equiv. units)</td>
<td>60</td>
</tr>
<tr>
<td>2 (101-200 equiv. units)</td>
<td>50</td>
</tr>
<tr>
<td>3 (51-100 equiv. units)</td>
<td>50</td>
</tr>
<tr>
<td>4 (up to 50 equiv. units)</td>
<td>50</td>
</tr>
<tr>
<td>5 (alleys)</td>
<td>20</td>
</tr>
</tbody>
</table>

Developers are required to dedicate right-of-way for the ultimate classification of the street and to construct the appropriate number of lanes required by their development. Streets not previously classified by the County, are classified at the time of preliminary plan approval. Proposed subdivisions that contain or abut the alignment of a roadway that is functionally classified as a collector or arterial, must accommodate the alignment and the developer must construct at least two lanes of the facility, unless approved otherwise.

Right-of-way requirements for local streets not classified in the 2010 Roadway Network plan are shown in Table 3. If a development continues an existing street or if the street will continue beyond the development in the future, then the functional classification is based upon the street in its entirety and not just the portion within the proposed development.

The Code specifies that the amount of property dedicated "shall be directly related to the projected impact of the proposed development on public improvements and facilities." A "dedication fee" may be provided in lieu of land for right-of-way acquisition or roadway construction needs related to the development. Proposed subdivisions that include a previously platted or dedicated street that does not conform to minimum right-of-way requirements must dedicate additional right-of-way along one or both sides of the street so the required right-of-way can be achieved.

**Recommendations for Pasco County**

The following recommendations highlight the changes which could be made to the current right-of-way reservation practices in Pasco County and should be implemented in conjunction with the recommendations at the end of this report.

✔ Develop a collaborative approach to negotiating right-of-way reservations and increase the current level of public involvement in right-of-way standards. The literature strongly emphasizes the benefits of early
and "good collaborative working relationships" in achieving desired right-of-way standards. (See Otay Mesa, California in the Case Studies to see how intergovernmental coordination and informal negotiations between public agencies and developers were used to protect future right-of-way.)

✓ Provide for administrative approval of variances from setback or lot dimensional requirements where needed to achieve right-of-way reservation objectives. This helps streamline the approval procedures for property owners, by avoiding the lengthy, formal variance review process.

✓ See also, General Recommendations.

Pinellas County

Pinellas County's Traffic Circulation Element provides Objectives and Policies guiding right-of-way protection procedures. The Element requires the County to maintain a "Subdivision Regulation Sector Plan, Traffic Corridors Plan, and Right-of-Way Requirements." This plan, commonly known as the "Sector Plan", identifies the location and right-of-way widths of future transportation improvements (see Figure 3). According to the County's Comprehensive Plan, the Sector Plan must be consistent with the Future Traffic

\[\text{Figure 3 - This excerpt from Sector 1 of the Pinellas County Comprehensive Plan illustrates the right-of-way widths required in the Tarpon Springs area.}\]
Circulation Map and the County must enforce the Sector Plan “to ensure the availability of needed right-of-way.”

The County’s Land Development Regulations include provisions for increased setback requirements for future transportation corridors depicted on the Sector Plan. The Code requires developers to set back from the future right-of-way line rather than from the existing property line. According to Pinellas County staff, setback requirements have been administered on a voluntary basis on future transportation corridors which lack funding, unless the County has funds to purchase the right-of-way. This practice may hamper the intent of the regulations if they are only imposed when funding is available. The nature of construction of transportation facilities and the high costs of acquiring right-of-way may limit the ability of the County to purchase the land under these circumstances, thereby reducing the chance the corridor will be protected. In Pinellas County, however, if the Board of County Commissioners designates a roadway on its five-year Capital Improvements Plan, the County may require a dedication; if it is not designated, the County may not.

Recommendations for Pinellas County

✓ Consider developing a “rough proportionality” standard for requiring right-of-way dedications and improvements, similar to that of Phoenix, Arizona. (See Appendix A)

✓ Consider the development and adoption of a trafficways plan and program under the Pinellas Planning Council that includes consultations with developers to negotiate dedications of right-of-way, and is flexible in allowing adjustments to the trafficways plan. (For additional information see Broward County, Florida in the Model Case Studies.)

✓ Implement a public involvement process for right-of-way reservation and provide for flexibility in the administrative process. Pinellas County is currently grappling with a fundamental dilemma in right-of-way reservation practice—a lengthy, uncertain roadway planning and development process, and legal prohibitions on long periods of right-of-way reservation where acquisition is uncertain. This dilemma is not easily resolved. However, communities may still achieve right-of-way reservation objectives.

The way to deal with this uncertainty is to establish effective public involvement mechanisms and mitigation measures. In other words, the program will be generally more effective in communities with a proactive and sound-planning program and early and continuing public involvement. It will be less effective in communities with a reactive approach to planning and public involvement (ie, reliance on public notices and hearings).

In addition, although the courts have not established an acceptable duration of reservation, courts will clearly penalize communities that attempt to impose long periods of reservation where there is little evidence of project support and few, if any, mitigation measures to offset hardships upon property owners. However, courts do not rely solely on the duration of reservation in evaluating the legitimacy of reservation programs. Daniel Mandelker, in his landmark analysis of highway reservation laws, explains:

“Just how short a reservation period must be is not clear, and one court held that even an one-year reservation period required compensation. The courts have upheld zoning moratoria that lasted for several years, but would probably balk at a highway reservation that remained in effect for so long a time... The inclusion of remedial provisions that mitigate the burden of a reservation on a landowner should help resolve the uncertainty
problem and support the use of a highway reservation early in the planning process.”

✓ Provide for administrative approval of variances from setback or lot dimensional requirements where needed to achieve right-of-way reservation objectives. This helps streamline the approval procedures for property owners, by avoiding the lengthy, formal variance review process.

✓ See also, General Recommendations.

Models and Case Studies

**Florida Department of Transportation Model Ordinance.** A team of planning and legal consultants prepared a model transportation corridor ordinance for the Florida Department of Transportation designed to, “preserve, protect, and/or acquire rights-of-way in transportation corridors.” The model recommends regulatory techniques local governments can use to manage development within future corridors, and suggests FDOT increase its involvement in the local government development approval process to ensure that FDOT projects are coordinated with local planning efforts.

The ordinance employs building setbacks to protect the future right-of-way. Structural, parking, and drainage setbacks are measured from the approximate alignment of the future right-of-way. If a reduction in setbacks is warranted after engineering studies establish the final alignment, then the setback may be reduced up to 10% by administrative approval. Mandatory dedications are targeted for projects adjacent to roadways planned for improvements within the next five years.

To offset the impacts of more stringent setback requirements, the ordinance includes provisions for flexibility in site design, and developers are encouraged to cluster structures. Administrative approval can be sought for building-to-building setbacks as well as for buffer reductions. In addition, the ordinance provides for transfer of density or intensity rights within the site. The model ordinance also incorporates provisions for interim uses - such as parking, nurseries, gate-houses, or storm-water retention ponds - within the future right-of-way. In exchange for use of the property, the developer must agree to relocate the use beyond the required setback area when requested by the local government.

The model ordinance encourages the use of transportation impact fee credits in exchange for a right-of-way protection. The study calls for FDOT to initiate intergovernmental agreements with local governments to set out procedures and provisions for exchange of right-of-way protection for impact fee credits. The developer would receive a transportation impact fee credit equivalent to the right-of-way value. Local governments may also vest the project for the necessary “transportation capacity.”

**Broward County, Florida.** Broward County has established the Broward County Planning Council that oversees 29 local governments. The Council’s role is “to promote coordinated, comprehensive, long-range planning throughout Broward County through the joint cooperation and participation of all local governments, public officials, and private citizens.” One primary component of the Council is the administration of the Broward County Trafficways Plan.

The Trafficways Plan is a roadway right-of-way preservation plan. Although first adopted in 1962, the Trafficways Plan was incorporated into the Countywide planning program in the mid-1970s. The plan is
implemented through the County and municipal development review process. Parcels undergoing platting are reviewed by the Council to assure that they dedicate right-of-way in accordance with the Trafficsways Plan. Although dedication is now administered on a voluntary rather than mandatory basis, the Council has been highly successful due to early consultations with developers and flexibility in allowing reasonable adjustments to the plan.

Requests to modify the plan must be approved by the Council staff. After review, the amendments are then reviewed by the Broward County Trafficsways Review Group, which is comprised of County technical staff, the Florida Department of Transportation, and the South Florida Regional Planning Council. After presentation from the affected local governments and reviewing all preliminary materials, the Trafficsways Review Group submits written comments to Council staff, which in turn submits a recommendation to the Council’s Land Use/Trafficsways Committee. The committee subsequently makes a recommendation to the full Council which takes final action.\textsuperscript{14}

**Delaware.** Delaware established a project to protect the capacity of one of its major north-south links to the state highway system.\textsuperscript{15} DelDOT and the affected local governments devised a capacity protection strategy and associated short-term preservation policy plan to protect Relief Route 13. As required by state law, DelDOT reviewed all county rezoning applications and subdivisions along the corridor. The review included approaching developers to reserve right-of-way and apply design/access standards to new developments. To encourage reservations, DelDOT allowed interim uses on the reserved property and negotiated with property owners to sell development rights of corridor right-of-way. These techniques have aided the State to gradually acquire right-of-way for needed expansion of the corridor.

**Madera County, California.** Due to the increases in development in eastern Madera County, Caltrans and the County proposed the expansion of the region’s two main roads. These roads, State Route 1 and State Route 49, travel through alternating developed and undeveloped areas. Although funds for construction or improvement were not yet programmed, Madera County and Caltrans were determined to protect the future corridor. Preservation efforts focused on informal negotiations with developers and property owners. Property owners were encouraged to voluntarily dedicate property or sell future rights-of-way located within their development.\textsuperscript{16} As a result of these actions, the public has become increasingly aware of the future highway plans and supportive of the need for additional right-of-way.

**Maricopa County, Arizona.** Maricopa County uses a combination of clear zones and setback requirements to protect future right-of-way from development. The ordinance divides the street network according to functional classification. It requires a 105 foot clear zone on either side of the centerline of its two designated thoroughfares; a 75 foot clear zone on either side of the centerline of existing or proposed Major Streets, Section Line Roads, State and Federal Highway with service roads, and a 55 foot clear zone for those without service roads. A clear zone of 40 feet is required from the centerline of existing or proposed Collector and Mid-Section Line Roads, and a clear zone of 25 feet from the centerline of existing or proposed local streets. This is increased to 30 feet where the local street is zoned for multiple family residential, commercial, or industrial use, depending on the adjacent zoning district, a distance of 25-30 feet. Building setbacks established in the zoning district are then measured from the respective clear zone setback line, unless a written report is received from the County Highway Department stating no future street is recommended along the subject setback line.\textsuperscript{17}

**Otay Mesa, California.** The Otay Mesa area is located in southern California and under the jurisdiction of the City of San Diego, the City of Chula Vista, and San Diego County. With projections of high growth,
the need for additional highway corridors was great. Two corridors were planned for the area, State Road 905 and State Road 125, however, corridor acquisition and construction remained unfunded. Without money to acquire property, techniques such as intergovernmental coordination between local and state agencies and informal negotiations between public agencies and developers were used to protect future right-of-way.

In California, Caltrans organized the Advance Transportation Systems Development (ATSD) program which oversees the planning, preservation, and financing of future right-of-way projects. ATSD’s major goals include achieving public and private sector cooperation, early involvement in land use development activities, and establishing “good collaborative working relationships” with local governments. To achieve these goals, Caltrans must review and approve all local government plans and development proposals. Furthermore, ATSD is involved in educating the public on the transportation planning process by serving as representatives at seminars, public and private forums, and on task forces and committees.

ATSD joined the City of San Diego and San Diego County in devising a variety of techniques to protect the SR 905 corridor. First, ATSD and the City of San Diego devised a method to plat the future-right-of-way within a subdivision as a separate lot. With the property owner’s approval, the “lot” would remain reserved and undeveloped until property acquisition commenced. Secondly, interim uses were allowed within the future corridor. Finally, because San Diego County factors land use encumbrances when calculating property value, property owners received a tax benefit when reserving property. On-site density transfers were permitted from reserved right-of-way to the remainder of the property, but this option was not available from dedicated property or property overlaid with a development easement. These techniques proved successful and the majority of SR 905 right-of-way was reserved.

**Palm Beach County, Florida.** Palm Beach County identifies its future rights-of-way on the “Right-of-Way Identification Map.” To protect future corridors, the County has instituted a 40 foot setback requirement, measured from the future right-of-way, for properties located along all roadways identified on the “Right-of-Way Identification Map.” In the past, the county also imposed a mandatory dedication requirement as a condition of development approval, but now pursues voluntary dedication, due to concern over the implications of the Dolan case (see Legal Considerations) on mandatory dedications (see also Phoenix, Arizona). Transfer of density from the dedicated area to another portion of the site is offered to developers who voluntarily dedicate property.

**City of Phoenix, Arizona.** In early 1995, the City of Phoenix developed a “proportionality” process that standardized right-of-way dedication and improvement requirements, in response to the Dolan case (see Legal Considerations). Historically, proportionality was informally determined with administrative “discretionary oversight.” The revamped procedure ensures “the principles of connectivity and proportionality are publicly known and documented.” The process establishes “progressive tiers of requirements based on minimum standards, health and safety factors, development impacts, and exactions that can be supported by individualized analyses.”

The first tier requires that every developed site should be adjacent to a paved public street, served by sewer and water, and meet drainage requirements. Improvements can include construction of curb, gutter, sidewalk and street lights. If any item is missing from a proposed development, the applicant must provide the missing elements. In the event a development abuts a street not paved to its ultimate width, the developer must “contribute cash or donated right-of-way equal to the value of the curb, gutter, and sidewalk.” The second tier of exactions involves potential health or safety hazards the development may create in the right-
of-way. An individualized analysis determines whether the developer must provide a mechanism to abate the hazards. Among other things, second tier exactions can include right-of-way for turning lanes, paving connection to nearest paved street, and/or curbs for access control.

The third tier of exactions addresses the number of new trips generated by a new project. For this grouping, improvements may comprise right-of-way dedication for a major street, street paving, and/or contribution of funds in lieu of paving. Finally, a discretionary item that contributes to the aesthetic value and functionality of the project comprises the fourth tier of exactions. Fourth tier exactions are on a voluntary basis, unless an individualized analysis states otherwise. Fourth tier requests include right-of-way dedication for a local or collector street, paving, landscaping, and/or multi-trail easements.

As opposed to the new standardized procedures, the former exaction process was based on “informal exaction formulas” and proportionality “was regarded more as a financial equity issue.” According to the City of Phoenix Development Services Department, the administration of the standardized proportionality procedures will reduce the amount of right-of-way dedications and improvements. The City estimates the loss at $2.8 million annually.\textsuperscript{18}

\textit{City of San Jose, California.} Within their General Plan, the City of San Jose includes a future right-of-way map which shows the location and width of right-of-way corridors. Preservation of these corridors is handled during the site plan review process. Historically, the City of San Jose has worked closely with developers regarding future rights-of-way. Developers are encouraged to locate outside the future corridor and future setback area. Rarely do cases arise when developers refuse to avoid these areas. In these few instances, if an area outside the corridor is suitable for the structure’s construction the City can require the developer to comply through the discretionary review process. According to City staff, informal negotiations are very successful and developers routinely agree to locate structures outside the future corridor and setback area.

The partnership between the City of San Jose and developers to preserve future corridors is exemplified in the development of State Route 85, which was originally planned in the late 1950s as a major freeway through Santa Clara County. The corridor was placed on the County and City general plans and corridor acquisition soon began. However, the project lost political support on the state level and property acquisition ceased. The City of San Jose and Santa Clara County maintained that the freeway was imperative to the southwestern development of the City. Soon, the Chamber of Commerce, developers, and citizen groups joined the City and County’s position in support of the facility.

Eventually, developers began to seek approval of projects that impacted State Route 85’s right-of-way corridor. Without funds to acquire property, the City relied on informal negotiations and incentives to prevent property owners from developing the corridor. The City allowed density transfers from the proposed right-of-way to other locations within the project site. Additionally, developers could place interim uses, such as nurseries, overflow parking, and golf ranges, within the corridor. In the 1980s, after the completion of an Environmental Impact Statement supporting the project and endorsement by a citizen task force, property acquisition for State Route 85 continued and the freeway was completed in 1994.\textsuperscript{19}
LEGAL CONSIDERATIONS

Legal concerns surrounding right-of-way preservation programs relate to due process issues and the potential for a regulatory taking claim. This section reviews key legal considerations of which local governments should be aware when developing a right-of-way protection program.

Regulatory Taking

Concerns over the potential for regulatory taking are paramount in programs aimed at preserving future right-of-way for transportation corridors. The Fifth Amendment to the United States Constitution states that, "private property [shall not] be taken for public use without just compensation." This clause, applied to the states through the Fourteenth Amendment, is designed to preclude government from requiring individuals to bear the costs of recognized public burdens. Despite the power of eminent domain and police power, taking private property to advance a legitimate public good can still constitute a taking.

As the courts have stated, "if a regulation goes too far, it will be recognized as a taking," Pennsylvania Coal Co. v. Mahon, 260 U.S. 393, 415 (1922). But what is too far? To answer this question, the United States Supreme Court developed various principles to determine when local governments must compensate property owners for a taking of private property.

One of these principles is whether the regulation denies "all economically beneficial and productive use of land," Lucas v. South Carolina Coastal Council, 120 L. Ed. 2d 798 (1992) at 813, 815. Although "economically beneficial" must be defined on a case by case basis, a regulation which denies all economically beneficial use will be considered a taking, requiring the payment of compensation to the landowner. An exception to this rule is made when the use proscribed by the regulation is also prohibited by the state law regarding property and nuisance. 20

Another issue relates to the appropriate unit of property against which a taking claim can be applied. The nonsegmentation rule has traditionally been applied, requiring that a taking claim must be reflective of the "parcel as a whole," and not "segments of the parcel," Penn Central Transportation Co. v. City of New York, 438, U.S. 104 (1978). This issue is critical to corridor preservation when determining whether a taking has occurred, as seldom does an affected property fall entirely within the mapped right-of-way. 21

Police Power

Through the use of the police power, local governments can employ various regulatory tools to regulate land use, and protect and advance the public health, safety, and welfare. For example, zoning ordinances limit and regulate uses to certain districts, provide for front and side yard setbacks, lot dimensional requirements, lot coverage, and establish desired density or intensity of development. Subdivision regulations control the division and subdivision of land into lots, blocks, and public ways. Because zoning and subdivision controls are interdependent, contemporary practice calls for combining them into a unified land development code.

Local codes may also provide for exactions and fees to offset the impacts of development. These types of regulatory tools are generally upheld if they are used to achieve a legitimate exercise of the police power. However, as stated by AASHTO, these regulations "have limitations when invoked for corridor preservation." Local governments are aware of the legal challenges to corridor preservation and are "generally cautious to avoid activities that approach a taking without just compensation." 22

Courts are more likely to find a right-of-way reservation program is reasonable, where it is based on a comprehensive plan and where the regulatory framework includes a process for ameliorating hardship.
Table 4: Summary of Current Practice

<table>
<thead>
<tr>
<th></th>
<th>Future ROW Needs Identification</th>
<th>Thoroughfare or Trafficways Plan</th>
<th>Setbacks Measured From Future ROW</th>
<th>Interim Uses Allowed</th>
<th>Transfer of Dev. Rights</th>
<th>Impact Fee Credits</th>
<th>Subdivision Regs Require Dedication</th>
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<tr>
<td>Hernando County</td>
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</table>

\(^5\) Strongly encouraged, but not required.

\(^6\) Credits are available to developments along the future ROW programmed for improvement in the TIP or CIP.

\(^7\) Dedications are required when transportation improvements are imminent.

\(^8\) Provided to developers dedicating ROW, but credit must be used at a location other than where the dedication was made; if dedicating on-site property, a density transfer is offered.

\(^9\) No impact fee ordinance adopted.

\(^10\) Density transferred only from reserved rights-of-way. Incentive is not available from dedicated property or property overlaid with a development easement.
imposed on individual properties. The validity of protecting future right-of-way through the planning and regulatory process was recently addressed in Palm Beach County v. Wright, 641 So. 2d 50 (Fla. 1994). The Florida Supreme Court upheld the thoroughfare map calling it "an invaluable tool for planning purposes" and a proper subject of the local police power.

In its analysis, the court stated that the thoroughfare map outlines generalized corridors, and therefore a taking claim cannot be determined until the property owner submits an actual development application. At this point an aggrieved owner could bring an inverse condemnation proceeding to determine if a taking had occurred.

This represented a departure from previous opinions related to state efforts to reserve future right-of-way. In Joint Ventures, Inc. v. Florida Department of Transportation, 563 So.2d 622 (Fla. 1990) the Florida Supreme Court weighed a state statute prohibiting issuance of development permits within mapped right of way for five years after recording an official map for the state highway system. The Court concluded that the statute was "a thinly veiled attempt to 'acquire' land by avoiding the legislatively mandated procedural and substantive protection," and a deliberate attempt to "depress land values in anticipation of eminent domain proceedings."

In Dolan v. City of Tigard, 114 U.S. 2309 (1994), the Supreme Court ruled local government exactions must be roughly proportional to the impacts of the project in question. In this case, the City of Tigard had conditionally approved a development permit for the Dolans to double the size of their hardware store and enlarge their parking lot. The conditions were that they must dedicate a portion of their property to the city for improvement of a storm drainage system, and dedicate a strip of land adjacent to the floodplain for a pedestrian/bicycle path.

The Dolans appealed, arguing that there was no relationship between the proposed development and the conditions placed on the permit. The Court found that mitigation of flooding and traffic bore the necessary nexus to the development conditions, but that the city had failed to demonstrate whether the degree of the exaction related to the impact of the development. The Court ruled that the required dedication must be, "related both in nature and extent to the impact of the proposed development."

**Eminent Domain**

One of the emerging issues surrounding the extent of eminent domain in right-of-way taking cases is that of business damages. In the State of Florida, one of the few states to pay business damages, payments are made to a business owner who has operated a business on the same site for at least five years, to mitigate any impacts caused to the business as a result of a taking of property under eminent domain proceedings. A property owner can make a claim to receive business damages for a number of circumstances including, relocation costs, loss of profit, losses from sale of equipment, and loss of goodwill (e.g., which may occur during a relocation, damaging a long-standing reputation in the community, specific client base, etc.). These payments are different from severance damages, which are paid to a property owner when the property is split in two, due to an eminent domain proceeding, to compensate for damage to the value of the remainder of the property.

The legislation provides few guidelines by which to determine the extent or duration of the impact on the property owner, making it difficult to determine an accurate monetary award. Often, business damages are so high that they cause the state to invoke a statutory provision for a whole taking (in which the amount of the claim exceeds the value of the remaining property). According to the Florida Transportation Commission's year end report for 1995, Florida spent a total of $303.5 million on right-of-way expenditures during the year. Of that total, 3% or $12.4 million was spent on business damages.
In Florida, the state government is responsible for paying all fees in an eminent domain case, including the attorneys fees incurred by the property owner and any independent appraisals requested by the property owner. In 1995, the State paid $34.9 million in attorneys' fees and $7.6 million in appraisal fees for right-of-way cases alone. The increasing costs associated with acquiring right-of-way in Florida are becoming prohibitive, and many local governments are recommending the business damages procedures be amended at the state level.

Conclusions

Based on past and recent case law, legal experts have identified the following guidelines for local governments to reduce the potential for taking claims resulting from the corridor designation process in Florida:25,26

- **Establish a foundation in the comprehensive plan.** In determining the validity of local regulatory actions, courts review whether the action is consistent with and based upon a local comprehensive plan. Regulatory programs are more likely to be found reasonable where they are based on a comprehensive plan which has been official adopted in accordance with due process requirements. The comprehensive plan is a legislative tool that serves as a land use “constitution” by establishing policies and directions for future development. In addition, planning studies establish the factual basis and need for corridor management efforts. Corridors intended for management should be designated in the comprehensive plan and development regulations should be enacted pursuant to the plan.

- **Include a clear statement of purpose and intent in the corridor management ordinance.** The regulation must have been clearly designed to achieve a legitimate public purpose. Regulations which have a clearly stated purpose to further legitimate planning and growth objectives are more likely to be upheld as valid than regulations whose purpose is unclear or which appear to be aimed primarily at reducing condemnation costs.

- **Provide mitigation measures to offset hardship.** Local governments should include in their transportation management ordinances, measures for mitigating hardships on affected property owners. At a minimum this should include variance provisions for property owners that are denied reasonable use of their property under the setback requirements. Other measures include allowances for interim uses in the right-of-way, on-site density transfers, or relaxed lot dimensional requirements. Financial incentives could also be used to offset hardship, such as tax abatements or impact fee credits. Local governments should also gauge whether the regulation impacts only a portion of the property, leaving the owner with a reasonable amount of developable land, and whether the regulation denies all reasonable use of the land. If all reasonable use is denied, then the option is to purchase, condemn, or issue a building permit.

- **Apply a short period of reservation, preferably tied to the Capital Improvements Plan.** The duration of the reservation should be for a short time period, based on a public commitment by the local government to acquire the right-of-way. It is more likely that the courts will invalidate a regulation with an unlimited or lengthy period of time than one which delineates a shorter length of the reservation. For example, communities could provide for a five year reservation period, tied to a capital improvements plan and program, with an option to extend the period after that time pursuant to a public hearing.

**RECOMMENDATIONS TO LOCAL GOVERNMENTS**

- **Initiate a special project to update planning and regulatory tools used to preserve right-of-way for existing and future corridors.** Local plans and land development regulations should be
updated to reflect changes in legislation, case law, and current practice. More specific guidance regarding suggested changes is indicated below.

- **Designate transportation corridors intended for right-of-way preservation in the comprehensive plan.** Local governments should designate all transportation corridors intended for right-of-way preservation by including the corridors in the traffic circulation or transportation element of the comprehensive plan. This should be accomplished through the goals, objectives and policies, the future needs assessment, and a corridor map that depicts the location and width of designated corridor rights-of-way. Corridors designated for this purpose must be consistent with the Corridor Management Report and List of the respective FDOT District. Under the statutory changes, designation of corridors is a precondition to adoption of a transportation-management ordinance.

- **Adopt a corridor management ordinance.** Local governments have been authorized by the recent changes to the transportation planning legislation to adopt transportation corridor management ordinances, whose purpose is to preserve and acquire needed right-of-way and protect transportation corridors for future growth or expansion of the transportation network. The ordinance should include:
  - criteria and regulations for managing land development in designated corridors;
  - descriptions of permitted and restricted uses within the corridor;
  - a public notice procedure and a provision for notifying FDOT of “substantial” land use changes within the corridor;
  - mitigation measures to offset hardship posed by the regulatory program;
  - a variance and appeal process; and
  - an intergovernmental coordination process for management of corridors which transcend jurisdictional boundaries.


- **Provide mitigation measures to reduce taking liability and to offset hardship imposed by the corridor management program, such as:**
  - *Allow interim uses in the corridor.* Allowable uses might include parking, storm water retention, signage, golfing ranges, nurseries, or other temporary uses.

  - *Provide impact fee credits for mandatory or voluntary dedication of right-of-way.* Communities with transportation impact fee requirements, should provide an impact fee credit for dedication of right-of-way in designated transportation corridors. Impact fees should be credited on a pro rata basis against the percentage of property dedicated at the assessed or appraised value of that property (see for example A Practitioner’s Guide to Development Impact Fees.)²⁸

  - *Allow on-site transfer of development rights where property owners reserve or dedicate land for future right-of-way.* This helps to reduce taking liability by allowing the developer a similar yield as otherwise would be obtained under the zoning.

  - *Relax zoning requirements for constrained properties.* Allow for some relaxation of lot dimensional, coverage, setbacks, or parking requirements for properties that would otherwise be difficult or impossible to develop under the regulatory framework. This should be provided on an informal administrative level, rather than through a formal variance process.
• Recognize reserved right-of-way when assessing property value and reduce property taxes accordingly. This technique was used in the Otay Mesa region of California.

• Review the adequacy of lot dimensional requirements along designated corridors. Minimum lot size, minimum lot frontage, setbacks, and lot width-to-depth ratios are established in land development regulations for various zoning districts. Minimum lot frontage requirements set the minimum lot width or frontage on a public road. Setback requirements establish minimum front, side, and rear yard setbacks to separate buildings from each other and set them back from the roadways for a desired distance. Lot width-to-depth ratios specify the maximum depth for a particular lot width and prevent the creation of long and narrow or irregularly shaped lots that increase the number and length of private access drives.

These tools should be carefully coordinated with corridor management objectives. For example, minimum lot frontage requirements should be higher on designated corridors to prevent creation of lots with small frontages that lead to access problems. Minimum lot frontage requirements could be tied to minimum connection spacing standards and varied according to provision of shared access. Lots should be generally deeper along arterials with adequate setbacks to allow for future road widening, as well as installation of shared service drives. Therefore, lot width-to-depth ratios could be somewhat higher along corridors (i.e. 1:4, 1:5) than the typical ratios for urban or suburban areas (1:2.5 or 1:3) A 1:4 ratio means that lots or parcels with 100 feet of frontage may not be deeper than 400 feet.

• Carefully manage frontage road connections. If not carefully managed, frontage roads can create operational problems at intersections. If frontage road connections are too close to major intersections, especially when combined with high traffic volumes, the result may be severe congestion, long delays, and high accident rates. Therefore, it is essential to “bell out” frontage road connections from the intersection (see Figure 4). One-way frontage roads generate fewer conflicts, although traffic problems are still prevalent, even with decreased traffic volumes.

![Figure 4 - It is essential to increase the separation between the frontage road and the arterial. Source: National Highway Institute Course # 15255, October 1991.](image)

- **Avoid continuous right-turn lanes.** Auxiliary lanes are helpful in removing turning vehicles from through-traffic movement. However, if right-turn lanes are not broken by physical barriers, drivers may use them as through-lanes, causing confusion as to where cars will turn. Frequent curb cuts and unpredictable turning and weaving movements result in hazardous driving conditions. Painted islands typically do little to discourage such maneuvers (see Figure 5).

![Continuous Right Turn Lanes](image)

- May encourage use as a through-lane
- May lead to confusion where cars will turn right into driveway or street?

*Figure 5 - Source: Land Development Regulations that Support Access Management.*

For these reasons, the Florida Department of Transportation now discourages use of frontage roads and continuous right-turn lanes for access management. Instead, communities are encouraged to improve subdivision and site design practices and apply access management standards along key corridors. Objectives are to coordinate vehicular and pedestrian access across adjacent properties and assure adequate separation and corner clearance of access points. Attention should be given to internal circulation, as well as opportunities for shared entrances and service drives.

- **Local governments and MPOs should work closely with FDOT on corridor management issues.** Corridor management practice is changing both on a state and local level. Therefore, it is crucial that local governments work closely with their respective FDOT District on corridor management and engage in a dialogue to clarify respective agency roles and commitments. According to a study of corridor preservation techniques conducted for the FDOT, “The development of partnerships between FDOT and local governments and a cooperative planning process is absolutely necessary if improvements in the preservation and protection of future rights-of-way is expected.” Establishment of a special task force or program, such as the Advance Transportation Systems Development program organized by Caltrans (Otoy Mesa case study), is one possibility for improving interagency collaboration on corridor management.

- **Consider establishing a Planned Unit Development or cluster zoning overlay along future corridors.** The advantage of this technique is that it allows for flexibility in site design and clustering of units to achieve a variety of public purposes, including right-of-way protection and access management.
• Engage in early negotiations with landowners and inform community leaders to increase awareness of the need for managing development along the corridor. Local governments should engage in special meetings or workshops to inform property owners of the corridor designation process and to involve community leaders and interest groups in these decisions. This will help increase public awareness of the importance of the corridor and the benefits of corridor management. It will also inform affected persons as to how the state and local governments involved, plan to alleviate individual hardships posed by the regulatory framework. People are much more likely to accept a corridor management program as a necessary hardship, if they have been fully informed and treated fairly in the decision making process.
GLOSSARY OF TERMS

_Dedication_ - a conveyance of property by a private owner to the public.

_Easement_ - a right-of-way granted, but not dedicated, for limited use of private land for a public or quasi-public purpose and within which the owner of the property shall not erect any permanent structures.

_Exactions_ - contributions or payments required as an authorized precondition for receiving a development permit. (Exactions may refer to mandatory dedications of land for road widening, or monetary assessments, such as transportation impact fees. In all cases, there must be a nexus and rough proportionality between the amount of the exaction and the purpose for which it is used.)

_Future Traffic Circulation Map_ - a map in the Traffic Circulation Element that depicts the general location of future collector, arterial, and limited access roads and related transportation facilities. The map must depict functional classifications of roads as principal, major, or minor and must identify the proposed number of lanes for future roadways.

_Inverse Condemnation_ - the taking or reduction in the value of private property as a result of governmental activity, without any formal direct exercise of eminent domain.

_Official Map_ - an ordinance in map form adopted by the governing body that shows the location and width of proposed streets, public facilities, public areas, and drainage right-of-way (the purpose of which is to prevent private development from encroaching on sites for proposed public improvement).

_Reservation_ - a) a provision in a deed or other real estate conveyance that retains a right for the existing owner if other property rights are transferred; b) a method of holding land for a public use by designating public areas on a plat, map, or site plan as a condition of approval.

_Right-of-Way_ - a strip of land occupied or intended to be occupied by a street, sidewalk, crosswalk, railroad, road, electric transmission line, gas pipeline, water main, sanitary or storm water main, shade trees, or for another special use. (Land in which the state, a county, or a municipality owns the fee simple title or has an easement dedicated or required for a transportation or utility use)

_Thoroughfare Plan Map_ - a map which depicts all roadways contained on the long range traffic circulation map and identifies the right-of-way widths for each roadway. The thoroughfare plan map is the official listing of rights-of-way to be reserved.

_Traffic Circulation Element_ - the portion of a comprehensive plan designed to establish the desired and projected transportation system in local jurisdictions and plan for future motorized and non-motorized traffic circulation systems.
Appendix A: Hernando County Frontage Roads
Appendix B: Phoenix, Arizona Code
DATE: April 17, 1995

TO: Raymond F. Bladine
    Deputy City Manager

FROM: George Flores
      Development Services Director

SUBJECT: PROPORTIONALITY

Purpose

This report informs the City Council about the revised process used to ensure the appropriate application of connectivity and proportionality to right of way dedication and improvement requirements placed by the Development Services Department as a condition of development permit issuance. It is estimated that this revised procedure will result in forgone right of way dedications and improvements in the amount of $2.8 million annually. This reflects an estimated annual reduction of 3.7 miles of major and collector street right of way formerly dedicated and/or improved by permit applicants.

Background

The Development Services Department has always practiced a form of rough proportionality for right of way dedication and improvement requirements. This was an informal procedure administered by staff members with discretionary oversight provided at the division manager level.

Concerns have been expressed by the City Council that this informal method of applying proportionality may not be consistent from staff member to staff member, individual customers may be unaware of their entitlement to proportionality decisions, there is no public documentation to demonstrate compliance with Court decisions on proportionality and connectivity. In response to this concern, the Development Services Department has undertaken a review of its process to formulate right of way dedication and improvement requirements and revised this process to ensure that adherence to the principles of connectivity and proportionality are publicly known and documented.

Philosophy

The Development Services Department is committed to furnishing information to customers regarding our obligation to adhere to connectivity and proportionality in placing right of way dedication and improvement requirements on permit issuance and to document how this is achieved. At the same time, our customers expect a timely, coherent, predictable and economical development approval process. Our challenge is to integrate these responsibilities so that both are reasonably achieved.
PROCESS

The former process of applying proportionality and connectivity relied on applicant knowledge of access or staff informing the applicant of this process. Staff would apply proportionality using unpublished guidelines. If the applicant disagreed, appeals were available for a fee to a staff member designated as the City Manager’s Representative and then to the City Council. An approximate two week lead time was required for each type of appeal. This process was time efficient because it relied on formulaic exaction requirements that were adjusted to fit exceptions.

A modicum of standardization is necessary in applying right of way requirements to the approximate 30,000 permits processed by the Development Services Department annually to maintain a timely and economical permit process. The revised process for connectivity and proportionality addresses this by establishing progressive tiers of requirements based on minimum standards, health and safety factors, development impacts, and exactions that can be supported by individualized analyses. This model is illustrated in Attachment A.

The first tier of exactions is based on the premise that every developed site in Phoenix should conform to a basic urban standard. Every site should be adjacent to a paved public street, should be served by sewer and water, and should drain without being flooded or creating a flood hazard for nearby property.

If a development site is selected that does not have these minimum elements present, the applicant will be required to provide the missing items. For example, if a site is selected adjacent to a street paved to its ultimate width but missing curb, gutter, sidewalk and street lights, the applicant will be required to provide these items even if the new trip generation does not warrant right of way dedication and street widening. If strip paving exists not to the ultimate width, the applicant would not be required to install the curb, gutter, and sidewalk that would be destroyed with future street widening but would be required to contribute cash or donated right of way (if any is needed) equal to the value of curb, gutter, and sidewalk for the length of his street frontage.

The second tier of exactions is premised on the belief that if a new development creates a health or safety hazard in the public right of way the owner is responsible for abating this hazard through development requirements. An individualized analysis will be conducted for every case in this category.

The third tier of exactions is based on new activity or intensity generated by the new project. For right of way dedications and improvements trip generation tables will be used that are developed by the Institute of Transportation Engineers (ITE) and are recognized as national standards. These tables relate expected trips per square foot to various occupancy types.
Water and sewer requirements for the third tier of exactions will be based on individualized analyses in every case. These analyses will use operational performance data, computer models, and Water Services master planning resources.

The fourth tier of exactions contains mainly discretionary items that would contribute to the aesthetic value and functionality of the project but may not be able to meet the tests of connectivity and proportionality. Staff may request these items but they cannot be required as a condition of permit issuance unless they can be supported by an individualized analysis.

IMPLEMENTATION METHODOLOGY

Staff will apply the 4 tiers of exactions described above using a proportionality worksheet (Attachment B) that explicates the exaction categories and indicates in which cases they should likely be applied. This worksheet will promote consistency among staff members. Publication of the worksheet will document the department's philosophy and interpretation of exaction proportionality and connectivity. Distribution of this worksheet to the public will inform our customers about how proportionality and connectivity are applied to their specific projects in formulating right of way exaction requirements and requests.

The shading in the boxes of the matrix indicates in which cases individual items of exaction will likely be required or not required. This will prompt staff to focus on the appropriate areas for potential exaction requirements. For items that cannot be required based on proportionality and connectivity, but are still desirable to enhance the aesthetics and/or the functionality of the project, staff may request inclusion of these items. Some customers may voluntarily agree to these requests because they will see the benefits to their project, they want to make a contribution to the community, or they may be able to realize a tax deduction.

APPEALS

Customers who disagree with staff application of proportionality and connectivity can exercise an administrative appeal to a senior manager in the Development Services Department. This appeal will be heard within one week and there will be no filing fee.

The next level of appeal if the customer remains in disagreement will be heard by a hearing officer appointed by the City Council. Ultimate recourse if the customer remains in disagreement would be to Superior Court.

It is anticipated that the hearing officer could be prepared with a 2 week notification period. An appeal fee would be charged to recover the cost of the hearing officer.

AFFECT ON CUSTOMERS

Applying precise exaction requirements and requests as discussed above relies on having specific data from the customer relating to type and intensity of use for the proposed new development project. This information is frequently not available at the preapplication conference which is the point at which specific development requirements are currently applied.
The level of detailed information needed from the customer to drive the revised exaction process is more typically received at the preliminary approval stage of the project. This means that the customer would not receive firm exaction requirements at the preapplication conference stage as is currently done. But would get a potential range of exactions to be finalized at the preliminary approval point.

The development approval process for large projects may become longer. For any exaction above the minimum individualized analyses have to be performed by the Water Services Department and if less than a full traffic lane is indicated by the trip generation tables the cash equivalent of a partial right of way dedication and improvement would have to be calculated.

No new staff will be added in Development Services to perform individualized analyses. Plan review staff will assume this workload. This may cause some degradation to current plan review turnaround times. More reliance will have to be placed on Water Services and Street Transportation staff for individualized analyses. This will dilute the one stop shop aspect of Development Services.

State legislation in its proposed form prohibits cities from recovering costs of performing individualized analyses for exaction requirements. This means that the staff cost for this work will have to be distributed over the entire fee paying base of the Development Services Department to maintain 100% cost recovery, unless general purpose funds are appropriated.

It is possible that new project designs proposed to Development Services will have impacts that cannot be mitigated within the constraints of proportionality and connectivity. Development Services cannot require mitigation measures beyond the limits of proportionality and connectivity, but projects with unmitigated adverse consequences do not have to be approved in the proposed design. In these cases the customer will be asked to redesign the project to eliminate adverse impacts that cannot be mitigated within the limits of proportionality and connectivity.

**FINANCIAL IMPACT**

The amount of right of way dedications and improvements obtained from permit customers will decline through use of the revised exaction process because right of way requirements will be more precisely fitted to development impacts.

The former exaction process was based on the use of informal exaction formulas and proportionality was regarded more as a financial equity issue. Abandonment of this principle in favor of the concept of activity proportionality and connectivity will cause a decline in right of way dedications and improvements estimated at $2.8 million annually. This is based on a comparison of the exaction matrix to the previous formulaic approach. The degree of decline actually experienced will depend on the customer response to requests for voluntary dedications and improvements over and above what can be supported under the tests of proportionality and connectivity.
CONCLUSION

The Development Services Department is committed to adhering to the principles of proportionality and connectivity through a process that is publicly documented and known to customers. A timely and convenient appeal process will be provided. The Department’s interpretation of proportionality and connectivity as well as the proposed implementation process has been discussed with key customer groups and a general public session was advertised and offered on August 18.

Implementation of this process will use existing plan review staff and assistance of departments outside of Development Services to perform individualized analyses. This may cause some degradation of plan review turnaround time in the Site Planning and Project Engineering Divisions. The overall fee schedule may have to be increased to recover the costs of individualized analyses since customers cannot be directly charged.

The amount of right of way dedications and improvements obtained from permit holders will decline, unless customers are amenable to voluntary dedications and improvements. Development Services will measure this decline as part of periodic implementation reports that will be submitted.

JEW:mls:950210AS
Proportionate Development Requirements Model

Tier A
Minimum requirements for Urban Standards that all developments are expected to meet - No individualized analysis performed.

Tier B
Health and safety requirements supported by individualized analysis.

Tier C
Activity impact requirements supported by National Standards and individualized analysis.

Tier D
Discretionary requests or supported by individualized analysis.
George Flores
Development Services Director

March 15, 1995

Jon E. Wendt
Assistant Development Services Director

RATIONALE AND METHODOLOGY FOR DETERMINATION OF
PROPORTIONATE DEVELOPMENT REQUIREMENTS FOR NEW PROJECTS

This memo sets forth the rationale and methodology for the approach to development proportionality used by the Development Services Department. This approach is intended to ensure that the tenets of the *Dolan vs. City of Tigard* decision are observed consistently and equitably in the approval of development plans and issuance of permits.

Rationale

In the *Dolan v. City of Tigard* decision, the U.S. Supreme Court established that development exactions imposed by governmental entities must be proportionate to the level of new activity generated by the development. The Development Services Department must adhere to this decision.

It is a goal of the Development Services Department to provide a timely, convenient, coherent and predictable development approval process. Achievement of this goal necessitates a certain level of standardization to efficiently process the volume of work submitted to the Department in an economical manner.

The provisions of the *Dolan* decision could be met by conducting an individualized assessment for each development project to determine its impacts and to formulate proportionate development requirements to address these impacts. Since upwards of 30,000 development permits are processed by the Department each year, the individualized impact assessment approach would militate against our goal of a timely and convenient development approval process.

Methodology

To efficiently deal with 30,000 permits annually while providing acceptable standards of service and adhering to the *Dolan* decision necessitates a threshold level of standardization that addresses development exaction proportionality for the bulk of our permit applications in a timely manner. This threshold level of exaction which would apply to all permit applications involves the concept of minimum standards.
new activity generated by the new development project. For street improvements this level of development exaction would be based on a matrix relating to degradation of service level on abutting streets and nearby intersections caused by the number of daily trips generated by the new development projects.

Some projects may have a measurable service level impact on existing major and collector streets, but not enough to meet the criteria for dedication and improvement of a full lane. In these cases we would compute the percentage of a traffic lane being added by the trips generated from the new development and collect funds in escrow equal to the percentage of right of way and improvements reflected by these trips. If preferred, the developer could dedicate right of way equal to the value of funds in escrow.

An individualized analysis will be conducted for each project that may require watermain looping, watermain/sewermain oversizing, or contribution to regional drainage or transportation facilities.

**Discretionary Off-Site Improvements**

Staff may inform new project owners about off-site improvements missing from their site that are above the minimum requirements and cannot be imposed under the activity generation criteria. Construction of these items cannot be conditions of plan approval or permit issuance. They may be included in the project solely at the discretion of the owner.

Some owners may decide to include discretionary items in their projects because they improve the functionality or marketability of the site, the owner wants to make a contribution to the community that is over and above mandatory requirements, or the owner may want a tax deduction.

Some examples of discretionary items could include:

- dedication and improvement of multiple use trails
- dedication of right-of-way for future improvements by the City
- street widening to improve site access or appearance
- right of way landscaping to enhance site aesthetics and marketability
- dedication and improvement of bus bays to improve site accessibility to transit users
- detaching sidewalks from curb to improve pedestrian safety and enhance site aesthetics
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<tr>
<th>Initiation of Queries</th>
<th>Manufacturing</th>
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<th>Medium</th>
<th>Small</th>
<th>Commercial/Retail</th>
<th>Large</th>
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<td><strong>OFF-SITE REQUIREMENTS</strong></td>
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<td><strong>RIGHT OF WAY (ROW) Dedications/Improvements</strong></td>
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<td><strong>A. MINIMUM REQUIREMENTS OR REQUESTS</strong></td>
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<td>A1. ROW &amp; collector/local street where access proposed (legal street frontage).</td>
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<td>A2. Drainage easement needed for on-site drainage.</td>
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<td>A3. Drainage easement, drainageway, or required drainage.</td>
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<td>A4. Utility easements to serve property.</td>
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<td>A5. Paving/curb, gutter, sidewalk abutting local/collector with access.</td>
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<td>A7. Installation of fire hydrant if spacing/tactical standards are not met.</td>
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<td>A8. Installation of water/sewer to serve subject property.</td>
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<td><strong>B. PUBLIC HEALTH AND SAFETY REQUIREMENTS OR REQUESTS</strong></td>
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<td>B1. ROW for safety, turning lanes, bottlenecks.</td>
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<td>B2. Curbs for drainage/access control.</td>
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<td>B3. Driveway widened for safety.</td>
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<td>B4. Paving connection to nearest paved street.</td>
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<td>B5. Installation of looped water system where pressure/supply problems would otherwise exist.</td>
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PROPORTIONATE DEVELOPMENT REQUIREMENT STUDY
February 17, 1995

LANE CAPACITY AT INTERSECTION ADT/PEAK HOUR

<table>
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<tr>
<th>Level of Service</th>
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<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<td>Two Lane Roadway</td>
<td>8500/800</td>
<td>9500/900</td>
<td>10500/1000</td>
<td>11500/1100</td>
<td>12500/1200</td>
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<tr>
<td>Four Lane Roadway</td>
<td>17000/1600</td>
<td>19000/1800</td>
<td>21000/2000</td>
<td>23000/2200</td>
<td>25000/2400</td>
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<tr>
<td>Six Lane Roadway</td>
<td>25500/2400</td>
<td>28500/2700</td>
<td>31500/3000</td>
<td>34500/3300</td>
<td>37500/3600</td>
</tr>
</tbody>
</table>

Assumptions:

- 650 vehicles per day per lane at LOS C
- D factor = 0.6
- K factor = 0.08
- Lane capacity adjusted for 60/40 directional travel

Traffic Impacts causing a degradation in Level of Service:

- ADT - 500 vehicles per day per through lane
- Peak Hour - 50 vehicle per hour per through lane

DEFINITION OF RELATIVE TRAFFIC IMPACTS:

**Low**

A land use that does not cause a degradation in level of service on adjacent streets and intersections serving the site. The full extent of traffic impacts from this type of development is expected to occur immediately.

**Medium**

A land use causing a degradation in the level of service on adjacent streets and intersections and may contribute to a reduction in level of service at close-by intersections that are not adjacent to the site. Some traffic impacts are expected immediately, but the full extent is not anticipated for one to three years after the development is initially opened.

**High**

A land use causing a degradation in two or more levels of service on adjacent streets and intersections and contributes to a reduction in level of service at locations that are not adjacent to the site. Some traffic impacts are expected upon the opening of each development phase. The full extent
of traffic impacts is not expected until all future phases are completed.

**PROPORTIONATE TRAFFIC IMPACT THRESHOLDS**

<table>
<thead>
<tr>
<th></th>
<th>Low Development Impact</th>
<th>Medium Development Impact</th>
<th>High Development Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Two Lane Roadway</strong></td>
<td>0 - 1000 vpd</td>
<td>1000 - 2000 vpd</td>
<td>over 2000 vpd</td>
</tr>
<tr>
<td></td>
<td>0 - 100 peak hr trips</td>
<td>100 - 200 peak hr trips</td>
<td>over 200 peak hour trips</td>
</tr>
<tr>
<td><strong>Four Lane Roadway</strong></td>
<td>0 - 2000 vpd</td>
<td>2000 - 4000 vpd</td>
<td>over 4000 vpd</td>
</tr>
<tr>
<td></td>
<td>0 - 200 peak hr trips</td>
<td>200 - 400 peak hr trips</td>
<td>over 400 peak hour trips</td>
</tr>
<tr>
<td><strong>Six Lane Roadway</strong></td>
<td>0 - 3000 vpd</td>
<td>3000 - 6000 vpd</td>
<td>over 6000 vpd</td>
</tr>
<tr>
<td></td>
<td>0 - 300 pk hour trips</td>
<td>300 - 600 peak hour trips</td>
<td>over 600 peak hour trips</td>
</tr>
</tbody>
</table>
SELECTED LAND USES TRIP GENERATION RATES:

INDUSTRIAL:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Weekday Trip Generation Rate</th>
<th>AM Peak Hour Trip Generation Rate</th>
<th>PM Peak Hour Trip Generation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Light Industrial (110)</td>
<td>6.97 per 1000 SF Gross Floor Area</td>
<td>0.92 per 1000 SF Gross Floor Area</td>
<td>0.98 per 1000 SF Gross Floor Area</td>
</tr>
<tr>
<td>General Heavy Industrial (120)</td>
<td>1.50 per 1000 SF Gross Floor Area</td>
<td>0.51 per 1000 SF Gross Floor Area</td>
<td>0.68 per 1000 SF Gross Floor Area</td>
</tr>
<tr>
<td>Industrial Park (130)</td>
<td>6.97 per 1000 SF Gross Floor Area</td>
<td>0.88 per 1000 SF Gross Floor Area</td>
<td>0.91 per 1000 SF Gross Floor Area</td>
</tr>
</tbody>
</table>

RESIDENTIAL:

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Average Weekday Trip Generation Rate</th>
<th>AM Peak Hour Trip Generation Rate</th>
<th>PM Peak Hour Trip Generation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Detached Housing (210)</td>
<td>9.55 per dwelling unit</td>
<td>0.74 per dwelling unit</td>
<td>1.01 per dwelling unit</td>
</tr>
<tr>
<td>Apartments (220)</td>
<td>6.47 per dwelling unit</td>
<td>0.56 per dwelling unit</td>
<td>0.69 per dwelling unit</td>
</tr>
</tbody>
</table>
Residential Condominium/ Townhouse (230)

- Average Weekday Trip Generation Rate: 5.86 per dwelling unit
- AM Peak Hour Trip Generation Rate: 0.44 per dwelling unit
- PM Peak Hour Trip Generation Rate: 0.55 per dwelling unit

OFFICE:

General Office Building - 100,000 SF (710)

- Average Weekday Trip Generation Rate: 14.03 per 1000 SF Gross Floor Area
- AM Peak Hour Trip Generation Rate: 1.90 per 1000 SF Gross Floor Area
- PM Peak Hour Trip Generation Rate: 1.37 per 1000 SF Gross Floor Area

Medical/Dental Office Building (720)

- Average Weekday Trip Generation Rate: 34.17 per 1000 SF Gross Floor Area
- AM Peak Hour Trip Generation Rate: 2.69 per 1000 SF Gross Floor Area
- PM Peak Hour Trip Generation Rate: 4.08 per 1000 SF Gross Floor Area

Office Park (750)

- Average Weekday Trip Generation Rate: 11.42 per 1000 SF Gross Floor Area
- AM Peak Hour Trip Generation Rate: 1.84 per 1000 SF Gross Floor Area
- PM Peak Hour Trip Generation Rate: 1.51 per 1000 SF Gross Floor Area

Business Park (770)

- Average Weekday Trip Generation Rate: 14.37 per 1000 SF Gross Floor Area
- AM Peak Hour Trip Generation Rate: 1.62 per 1000 SF Gross Floor Area
- PM Peak Hour Trip Generation Rate: 1.48 per 1000 SF Gross Floor Area
RETAIL:

<table>
<thead>
<tr>
<th>Shopping Center - 50,000 SF (820)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weekday Trip Generation Rate</td>
<td>91.65 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>AM Peak Hour Trip Generation Rate</td>
<td>2.16 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour Trip Generation Rate</td>
<td>8.44 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shopping Center - 100,000 SF (820)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weekday Trip Generation Rate</td>
<td>70.67 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>AM Peak Hour Trip Generation Rate</td>
<td>1.62 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour Trip Generation Rate</td>
<td>6.56 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shopping Center - 500,000 SF (820)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weekday Trip Generation Rate</td>
<td>38.65 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>AM Peak Hour Trip Generation Rate</td>
<td>0.84 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour Trip Generation Rate</td>
<td>3.66 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fast Food Restaurant with Drive-Through Window (834)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weekday Trip Generation Rate</td>
<td>632.12 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>AM Peak Hour Trip Generation Rate</td>
<td>55.56 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour Trip Generation Rate</td>
<td>36.53 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Station with Convenience Market (845)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weekday Trip Generation Rate</td>
<td>737.99 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>AM Peak Hour Trip Generation Rate</td>
<td>65.39 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour Trip Generation Rate</td>
<td>53.73 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Convenience Market - Open 24 Hours (851)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Weekday Trip Generation Rate</td>
<td>737.99 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>AM Peak Hour Trip Generation Rate</td>
<td>65.39 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
<tr>
<td>PM Peak Hour Trip Generation Rate</td>
<td>53.73 per 1000 SF Gross Floor Area</td>
<td></td>
</tr>
</tbody>
</table>
## TRANSPORTATION DEVELOPMENT THRESHOLDS

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Low Development Impact</th>
<th>Medium Development Impact</th>
<th>High Development Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INDUSTRIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Light Industrial</td>
<td>100,000 SF</td>
<td>200,000 SF</td>
<td>Over 200,000 SF</td>
</tr>
<tr>
<td>General Heavy Industrial</td>
<td>150,000 SF</td>
<td>300,000 SF</td>
<td>Over 300,000 SF</td>
</tr>
<tr>
<td>Industrial Park</td>
<td>100,000 SF</td>
<td>200,000 SF</td>
<td>Over 200,000 SF</td>
</tr>
<tr>
<td><strong>RESIDENTIAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Family Detached</td>
<td>100 DU</td>
<td>200 DU</td>
<td>Over 200 DU</td>
</tr>
<tr>
<td>Apartments</td>
<td>150 DU</td>
<td>300 DU</td>
<td>Over 300 DU</td>
</tr>
<tr>
<td>Condominium/Townhouse</td>
<td>175 DU</td>
<td>350 DU</td>
<td>Over 350 DU</td>
</tr>
<tr>
<td><strong>OFFICE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Office Building</td>
<td>50,000 SF</td>
<td>100,000 SF</td>
<td>Over 100,000 SF</td>
</tr>
<tr>
<td>Medical/Dental Office Building</td>
<td>25,000 SF</td>
<td>50,000 SF</td>
<td>Over 50,000 SF</td>
</tr>
<tr>
<td>Office Park</td>
<td>50,000 SF</td>
<td>100,000 SF</td>
<td>Over 100,000 SF</td>
</tr>
<tr>
<td>Business Park</td>
<td>60,000 SF</td>
<td>120,000 SF</td>
<td>Over 240,000 SF</td>
</tr>
<tr>
<td><strong>RETAIL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping Center &lt; 50,000 SF</td>
<td>12,000 SF</td>
<td>24,000 SF</td>
<td>Over 24,000 SF</td>
</tr>
<tr>
<td>Shopping Center &gt; 100,000 SF</td>
<td>NA</td>
<td>NA</td>
<td>Over 100,000 SF</td>
</tr>
<tr>
<td>Shopping Center &gt; 500,000 SF</td>
<td>NA</td>
<td>NA</td>
<td>Over 500,000 SF</td>
</tr>
<tr>
<td>Fast Food Restaurant with Drive-Through Window</td>
<td>1,500 SF</td>
<td>3,000 SF</td>
<td>Over 3,000 SF</td>
</tr>
<tr>
<td>Service Station with Convenience Market</td>
<td>1,500 SF</td>
<td>3,000 SF</td>
<td>Over 3,000 SF</td>
</tr>
<tr>
<td>Convenience Market</td>
<td>1,500 SF</td>
<td>3,000 SF</td>
<td>Over 3,000 SF</td>
</tr>
</tbody>
</table>
INTRODUCTION
The Transit Department has been requested to develop a proportionality approach to requests for transit improvements at developments, in particular, bus stop pads, benches and shelters. The intent is that a method be developed which is consistent with the Dolan v. City of Tigard decision by the U.S. Supreme Court. This decision states that development exactions imposed by governmental entities must be proportionate to the level of new activity generated by the development.

METHOD
The following table shows the requirements for each type and size of development to provide either a bench/bus stop pad or a shelter/bus stop pad. The development categories and vehicle trip generation rates are those compiled by the Street Transportation Department from the Trip Generation Manual, 5th Edition, 1991, ITE.

The transit generation rates by selected land use was compiled by the Transportation Research Board (TRB) based upon a number of reports and studies from around the country in 1978. The data provided by this table shows the daily bus percentage of total trips to and from selected land use generators. The generators examined to build this database were located outside the central business districts of major cities and do not reflect dense urban cores.

The report prepared by TRB states that the trip rates provided are representative of a wide range of values for each generator and suggests that the collection of local data to augment this study might be useful. Therefore, Transit is retrieving data from the Maricopa County Travel Reduction Program office, which holds the results of mode split surveys for each business site which employs 50 personnel or more within Maricopa County. For instance, 9% of the City of Phoenix employees utilize the bus and 6% of Maricopa County employees utilize the bus, according to most recent surveys. A statistically valid sample of these survey results, in addition to results from the Transit Department’s Fall 1995 On-Board Origin/Destination Survey, will provide region specific data to test the TRB results.

Finally, the predicted total trips generated by a site is multiplied by the percentage of bus trips to find the predicted number of bus trips. The percentage of a bench/bus stop pad or shelter/bus stop pad improvements is determined based upon the transit warrant system. The warrant system states that the use of a bus stop by 50 or more people per day warrants a bench and the use of a bus stop by 100 people or more per day warrants a transit shelter.

Copies of the Proportionate Development Requirement Study prepared by Street Transportation, the relevant table from the TRB Quick-Response Urban Travel Estimation Techniques and Transferable Parameters, and the copy of the Bus Stop Warrants Table from the Valley Metro Bus Stop Handbook are attached.
## Transit Proportionate Development Requirements

March 15, 1995

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Daily Trip Generation</th>
<th>TRB Guide: Daily Bus % of Trips*</th>
<th>Bus Trips</th>
<th>% of Bench/Bus Stop Pad Costs (50 bus trips/day=1 bus stop pad)</th>
<th>% of Bus Shelter/Bus Stop Pad Costs (100-200 trips/day=1 bus shelter)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gen Lt Industrial-100,000 SF</td>
<td>697 (6.97 per 1000 SF)</td>
<td>5</td>
<td>35</td>
<td>70%</td>
<td>NA</td>
</tr>
<tr>
<td>Gen Lt Industrial-200,000 SF</td>
<td>1394</td>
<td>5</td>
<td>70</td>
<td>NA</td>
<td>70%</td>
</tr>
<tr>
<td>Gen Lt Industrial-300,000 SF</td>
<td>2091</td>
<td>5</td>
<td>105</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Gen Hvy Industrial-150,000 SF</td>
<td>225 (1.5 per 1000 SF)</td>
<td>5</td>
<td>11</td>
<td>22%</td>
<td>NA</td>
</tr>
<tr>
<td>Gen Hvy Industrial-300,000 SF</td>
<td>450</td>
<td>5</td>
<td>23</td>
<td>46%</td>
<td>NA</td>
</tr>
<tr>
<td>Gen Hvy Industrial-450,000 SF</td>
<td>675</td>
<td>5</td>
<td>34</td>
<td>68%</td>
<td>NA</td>
</tr>
<tr>
<td>Industrial Park-100,000 SF</td>
<td>697 (6.97 per 1000 SF)</td>
<td>5</td>
<td>35</td>
<td>70%</td>
<td>NA</td>
</tr>
<tr>
<td>Industrial Park-200,000 SF</td>
<td>1394</td>
<td>5</td>
<td>70</td>
<td>NA</td>
<td>70%</td>
</tr>
<tr>
<td>Single Family Detached-100 DU</td>
<td>96 (9.55 per DU)</td>
<td>3.2</td>
<td>3</td>
<td>6%</td>
<td>NA</td>
</tr>
<tr>
<td>Single Family Detached-200 DU</td>
<td>192</td>
<td>3.2</td>
<td>6</td>
<td>12%</td>
<td>NA</td>
</tr>
<tr>
<td>Single Family Detached-300 DU</td>
<td>288</td>
<td>3.2</td>
<td>9</td>
<td>18%</td>
<td>NA</td>
</tr>
<tr>
<td>Apartments-150 DU</td>
<td>971 (6.47 per DU)</td>
<td>12.4</td>
<td>120</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Apartments-300 DU</td>
<td>1941</td>
<td>12.4</td>
<td>241</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Apartments-450 DU</td>
<td>2912</td>
<td>12.4</td>
<td>361</td>
<td>NA</td>
<td>150%</td>
</tr>
<tr>
<td>Res Condo/Tnhse-175 DU</td>
<td>1026 (5.85 per DU)</td>
<td>5.6</td>
<td>57</td>
<td>100%</td>
<td>NA</td>
</tr>
<tr>
<td>Res Condo/Tnhse-350 DU</td>
<td>2051</td>
<td>5.6</td>
<td>115</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Res Condo/Tnhse-525 DU</td>
<td>3077</td>
<td>5.6</td>
<td>172</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Gen Office Bldng-50,000 SF</td>
<td>702 (14.03 per 1000 SF)</td>
<td>5</td>
<td>35</td>
<td>70%</td>
<td>NA</td>
</tr>
<tr>
<td>Gen Office Bldng-100,000 SF</td>
<td>1403</td>
<td>5</td>
<td>70</td>
<td>NA</td>
<td>70%</td>
</tr>
<tr>
<td>Property Type</td>
<td>Distance (m)</td>
<td>Parking Spots</td>
<td>Pass Rate (%)</td>
<td>NA</td>
<td>Percent</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------</td>
<td>---------------</td>
<td>---------------</td>
<td>----</td>
<td>---------</td>
</tr>
<tr>
<td>Gen Office Bidng-150,000 SF</td>
<td>2105</td>
<td>5</td>
<td>105</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Med/Dental Office-25,000 SF</td>
<td>854</td>
<td>5</td>
<td>43</td>
<td>86%</td>
<td>NA</td>
</tr>
<tr>
<td>Med/Dental Office-50,000 SF</td>
<td>1709</td>
<td>5</td>
<td>85</td>
<td>NA</td>
<td>85%</td>
</tr>
<tr>
<td>Med/Dental Office-75,000 SF</td>
<td>2563</td>
<td>5</td>
<td>128</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Office Park-50,000 SF</td>
<td>571</td>
<td>5</td>
<td>29</td>
<td>58%</td>
<td>NA</td>
</tr>
<tr>
<td>Office Park-100,000 SF</td>
<td>1142</td>
<td>5</td>
<td>57</td>
<td>100%</td>
<td>NA</td>
</tr>
<tr>
<td>Office Park-150,000 SF</td>
<td>1713</td>
<td>5</td>
<td>86</td>
<td>NA</td>
<td>86%</td>
</tr>
<tr>
<td>Business Park-60,000 SF</td>
<td>862</td>
<td>5</td>
<td>43</td>
<td>86%</td>
<td>NA</td>
</tr>
<tr>
<td>Business Park-120,000 SF</td>
<td>1724</td>
<td>5</td>
<td>86</td>
<td>NA</td>
<td>86%</td>
</tr>
<tr>
<td>Business Park-240,000 SF</td>
<td>3449</td>
<td>5</td>
<td>172</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Shop Ctr at 12,000 SF</td>
<td>1100</td>
<td>3</td>
<td>55</td>
<td>100%</td>
<td>NA</td>
</tr>
<tr>
<td>Shop Ctr at 24,000 SF</td>
<td>2200</td>
<td>3</td>
<td>110</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Shop Ctr at 50,000 SF</td>
<td>4583</td>
<td>3</td>
<td>229</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Shop Ctr over 100,000 SF</td>
<td>7067</td>
<td>3</td>
<td>212</td>
<td>NA</td>
<td>100%</td>
</tr>
<tr>
<td>Shop Ctr over 500,000 SF</td>
<td>19325</td>
<td>3</td>
<td>580</td>
<td>NA</td>
<td>290%</td>
</tr>
<tr>
<td>Fast Food Rest-1,500 SF</td>
<td>948</td>
<td>1</td>
<td>9</td>
<td>18%</td>
<td>NA</td>
</tr>
<tr>
<td>Fast Food Rest-3,000 SF</td>
<td>1896</td>
<td>1</td>
<td>19</td>
<td>38%</td>
<td>NA</td>
</tr>
<tr>
<td>Fast Food Rest-4,500 SF</td>
<td>2845</td>
<td>1</td>
<td>28</td>
<td>56%</td>
<td>NA</td>
</tr>
<tr>
<td>Convenience Market-1,500 SF</td>
<td>1107</td>
<td>1</td>
<td>11</td>
<td>22%</td>
<td>NA</td>
</tr>
<tr>
<td>Convenience Market-3,000 SF</td>
<td>2214</td>
<td>1</td>
<td>22</td>
<td>44%</td>
<td>NA</td>
</tr>
<tr>
<td>Convenience Market-4,500 SF</td>
<td>3321</td>
<td>1</td>
<td>33</td>
<td>66%</td>
<td>NA</td>
</tr>
</tbody>
</table>


7. Chapter 163.3177 (6) (b), Florida Statutes.


