

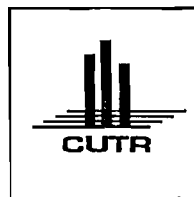
**COUNTYWIDE PARKING POLICY STUDY
LITERATURE AND REGULATIONS REVIEW
FINAL REPORT**



COUNTYWIDE PARKING POLICY STUDY
LITERATURE AND REGULATIONS REVIEW

Prepared for the
Metropolitan Planning Organization for the Miami Urbanized Area

by the
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COUNTYWIDE PARKING POLICY STUDY

LITERATURE AND REGULATIONS REVIEW

This work is intended as a small data collection and analysis study for future use with a much larger Countywide Parking Policy Study to be commissioned by the Metropolitan Dade County Metropolitan Planning Organization (MPO). The purpose of this study is not to recommend specific parking policies; that is the intent of the larger (and more locally concentrated) comprehensive study. The goal of this study is to present the Metropolitan Planning Organization with information to be used in conjunction with the development of the tasks associated with the larger policy study, which will "...conduct a comprehensive study of parking and recommend a parking policy complementary to development of the adopted Transportation Plan and Comprehensive Development Master Plan."

One half of this small study involves a literature review in two areas: first, nationally published generalized studies of the effects of various municipal parking policies in other parts of the country; and second, studies regarding parking or parking related policies in Florida, including Miami and Dade County. The other half is a review of parking regulations that have been promulgated by the State of Florida, Dade County, and the 27 municipalities within Dade County. These statutes, ordinances, regulations, and rules have been "...collected, reviewed, analyzed, and evaluated with respect to development requirements, provision and pricing options of governmental agencies, and direct and indirect effects they may have on the transportation system."

This study investigates and reflects on seven aspects of parking policy and its effects:

1. parking's role in inducing and sustaining travel related to both pattern and volume, especially with respect to encouraging single occupant vehicle (SOV) travel;
2. parking's use as a governmental control for land use and zoning;
3. parking's purpose in local government revenue generation;

4. parking's role and function in economic growth and development attractiveness from both public and private sector perspectives;
5. parking's roles in institutional issues such as development financing and joint development;
6. parking's place in the ISTEA era of transportation planning, programming, and funding; and
7. how parking management strategies could be considered as real options to alleviate traffic congestion.

Following the literature and regulations reviews are *Appendix A*, abstracts of the publications used in the literature review; *Appendix B*, parking-related section from state statutes and local zoning ordinances; and *Appendix C*, an overview of the local Dade County municipal regulations in matrix format. An extensive bibliography is also included.

I. INTRODUCTION

When a citizen or visitor has a parking problem, his or her perception is that the entire metropolitan area has a "parking problem." When a citizen or visitor is stuck in traffic in his or her vehicle amongst a sea of other single-occupant vehicles, he or she tends to perceive that the area has a "highway congestion problem." Yet, in many cases, these two situations are symbolic of an important and interconnected relationship--the overall effects of parking policies on urban transportation issues. Too little parking creates excess traffic in many urban areas as drivers "circle the block" looking for an available spot to park. On the other hand, too much parking encourages excessive use of the single occupant vehicle (SOV) as the primary commuter travel mode, clogging the arteries of an urban area and wasting valuable resources. Even the creation of a rapid mass transit system may affect actual or perceived parking issues both within and outside the transit corridors. A slight miscalculation of ridership patterns may result in one transit node having insufficient parking for a large ridership, resulting in commuter parking spillover into nearby residential areas; at the same time, parking facilities in excess of current ridership may have prematurely been installed at another node, giving the impression of administrative waste and mismanagement. The public policy issue is how to balance the needs of parking users with publicly mandated goals such as improved access to places of employment or markets, traffic congestion mitigation, and air pollution abatement. Governmental agencies and officials are faced with an imposing central question: *How much parking is enough to satisfy commuters, visitors, shoppers, developers, and public policy objectives?*

This study reviews the national literature that has been developed on the subject over the last decade. That time period has seen a change in the attitude of government agencies that have traditionally been the regulating authorities over parking issues in their local areas. This shift has involved slow change from the mandated supply of "more parking" to one of regulation of parking supplies in limited attempts to affect the behavior of parking users. Another reason for this incremental change in attitude has been the recognition that transportation policy and parking policy are interrelated and inseparable.

Obviously, public policy change is not made overnight. The presence of many actors, issues of equity and development, recognition of civic environmental responsibility, and conflicting interest groups can create the perception that change comes at a snail's pace. Yet, the very nature of the institutions by which the democratic process performs its specific functions has allowed progress

to be made in many significant public policy areas. Change in parking policy has been incremental; it has been evolving ever since at least 1923; and it is still evolving today.

This review incorporates an historical overview of the parking-related literature that has developed since the end of the Second World War. It then goes on to examine seven general aspects of parking policy through literature published since the late 1970s.

II. LITERATURE DISCUSSION

Historical Overview

The development of parking policies historically has followed the rise of the motorcar as the dominant mode for moving people from place to place. Beginning with a 1923 zoning ordinance requiring that parking be provided for multi-family dwellings in Columbus, Ohio (*Zoning Applied to Parking*, LeCraw and Smith, 1947), and continuing with the 1935 introduction of the first parking meter in downtown Oklahoma City, Oklahoma, cities and towns attempted to control and regulate the "where" "when" "how" and "at what cost" of urban automobile parking. These policies generally were developed to aid the commercial growth of town and city central business districts, as described in "Parking as a Factor in Business" (1954) and "What Parking Means to Business" (1955), both from the Highway Research Board. Parking policy-making expanded to include additional jurisdictional areas through the promulgation of zoning regulations covering parking space requirements for new commercial and residential developments in expanding urban and suburban areas. However, the primary focus of parking policy-makers was on downtown commercial centers and major trip generators.

Scientific approaches to determining the quantity, size, and location of parking spaces were developed by the Institute of Transportation Engineers (ITE), including *Industrial Plant Parking, A Recommended Practice* (1959) and *Parking Facilities for Industrial Plants* (1969), while "rules of thumb" were adopted by developers and lenders as to the "correct" number of parking spaces that would make developments competitive in the marketplace. Thus, on one hand, governmental statutes, ordinances, and regulations attempted to provide some intra-jurisdictional consistency in parking policies; on the other hand, commercial rules of thumb worked towards leveling the commercial market's perceived playing fields.

During the first three Post-War decades, the onset of suburbia produced a series of publications examining parking as both a stand-alone phenomena and as one factor in the examination of overall municipal policies. The U. S. Department of Commerce devised its *Parking Study Manual* (Bureau of Public Roads, 1957) as an instruction manual calling for consistency in parking policy study methodology use by public administrators and planning and zoning officials. The Eno Foundation created a series of publications regarding the subject: *Parking Authorities* (Mogren, 1953); *Parking: Legal, Financial, Administrative*, (1956); *Parking* (Burrage and Mogren, 1957);

Traffic Design of Parking Garages (Ricker, 1957); *Access and Parking for Institutions* (Smith, 1960); *Zoning, Parking, and Traffic* (Witthof and Kanaan, 1972); and *Parking and Access at General Hospitals* (Kanaan, 1973). The Highway Research Board published *Parking Principles*, and the American Planning Association added *Off-Street Parking Requirements* (Bergman) to the basic literature on parking, both in 1971 (the latter revised 20 years later).

Two events coincided to add a significant amount of literature on this subject in the 1970s: the creation of the Environmental Protection Agency (EPA) and the Oil Crisis. Both of these events pointed out America's co-dependent relationship with the petroleum-powered automobile. The Federal Energy Administration published *Guidelines for Travel Demand Analysis of Program Measures to Promote Carpools, Vanpools and Public Transportation* (Cambridge Systematics 1976). Also in the same year, the EPA issued *Parking Management Strategies for Reducing Automobile Emissions* (Dern). Central Missouri State University looked at the legitimacy of government-induced commuter parking regulations in an article titled "Parking Restrictions: Commuter Parking" (*The National Traffic Law News* 4, November 1977).

The National Parking Association published *Toward a New Urban Policy: Report of a Study for the National Parking Association* (Harbridge House, 1978), which looked at the growing problem of parking in the nation's central business districts. In 1979, the Federal Highway Administration published the three volume series *Study of Parking Management Tactics*, consisting of *Volume One: Overview*, *Volume Two: Overview and Case Studies*, and *Volume Three: Reference Guide* (DiRenzo, et al., December 1979).

Municipal planners had sought to alleviate traffic congestion in urban business and residential districts across the country through zoning regulations to ensure that developers supplied adequate off-street parking to meet perceived peak user demands. The idea was that sufficient parking would take commuter vehicles off city streets, reduce excessive circulation as commuters searched out parking spaces ("cruising"), cut down noxious exhaust emissions from idling automobiles, and eliminate gridlock in city cores. It was assumed that, by regulating supply in one market (the parking user), that another market (the SOV user) could be managed. The October 1978 article by Donald Shoup and Don Pickrell, "Problems with Parking Requirements in Zoning Ordinances," in the Eno Foundation's *Traffic Quarterly* (Vol.32, No.4) skillfully addressed the erroneous assumption that drove this concept, which was that increasing supply would lessen demand. The market had reacted, not by parking off-street and relieving traffic woes, but by

driving more single occupant vehicles and adding to urban congestion. The Shoup and Pickrell article was a turning point in the use of zoning regulation of parking supply provision as a city planning instrument for alleviating traffic congestion. Refer to *Appendix A* for an abstract of this work.

The decade of the 1980s saw a broadening and deepening of the investigative nature of parking research as transportation demand management (TDM) programs began to be instituted via transportation management associations (TMA) and through other public policy initiatives. However, the literature often reflected a desire to create additional parking through better management of existing facilities and revised design and construction techniques, including *Parking Management* (Hines, 1982). ITE published the "bibles" of parking space determination: *Parking Generation* in 1985; *Employment Center Parking Facilities* in 1988; and *Parking Management, A Toolbox for Alleviating Traffic Congestion* in 1989. The Downtown Research & Development Center published *Better Parking Downtown: Increasing Supply and Managing It Better* (Alexander, 1987).

The National Association of Industrial and Office Parks (NAIOP) published an extensive nationwide study which was one of the first compilations of direct research into the effects of parking policies on developers and lenders. The survey results of the NAIOP *Parking for Industrial and Office Parks* (Casazza, 1986) was abstracted for this study (see *Appendix A*). A reading of that survey suggests that there needs to be more communication between those who affect parking policies--namely developers, lenders, governmental zoning and planning personnel--and parking administrators. By developing an areawide parking policy and encouraging consistent policy administration, developers, lenders, and employers on one hand, and public administrators on the other, can cooperate on reducing wasted space that is given over to underutilized parking, while at the same time creating opportunities for increased commuter usage of alternatives to the single-occupant vehicle and for assisting traffic mitigation programs. This was one of the only national studies available that asked direct questions of the developers and lenders and brought to the fore the nature of the rule of thumb that governed developer and lender preferences in parking quantities.

The Eno Foundation also continued to publish parking-related materials: *Parking in a Changing Time* (Levinson), and *Parking for Institutions and Special Events* (Whitlock), both in 1982. Public Technology, Inc., published a series of parking-related works for the U.S. Government: "Parking

and Traffic Enforcement," 1981; and "Flexible Parking Requirements", "The Coordination of Parking with Public Transportation and Ridesharing", and "Innovations in Parking Management," all in 1982. The 1990 re-edition of Parking (Burrage and Mogren) by the Eno Foundation resulted in a 335-page manual that includes suggested methods to determine parking demand and presents guidelines for use by zoning and planning officials in determining parking space requirements for various land uses.

Within the last ten years there has been a shift in the sense and tone of publications regarding parking issues as traffic congestion and mitigation, resource conservation and environmental awareness, urban revitalization, mass transit, and public equity issues have usurped the half-century old concept of "more parking" on the urban policy landscape. The literature on parking is rich, broad, deep, and varied.

Two journals in particular address parking issues on a regular basis and many of the works cited in this study are from these two sources. One is *ITE Journal* (Institute of Transportation Engineers, published monthly by the ITE, 525 School Street, S.W., Suite 410, Washington, DC 20024-2797) "...by and for transportation engineers, transportation planners, and others responsible for the safe and efficient movement of people and goods on our surface transportation system." The second is *Transportation Quarterly* (Eno Transportation Foundation, Inc., 44211 Slatestone Court, Lansdowne, Virginia 22075) published "...to provide those many experts and professionals of long experience in the field...with a medium for the expression and distribution of their ideas and views." These two journals are the most consistent contributors to the study of parking policies.

Of particular interest are the publications produced from two symposia held in Seattle, Washington, one in 1990 and the second in 1993. The first, *Proceedings of the Commuter Parking Symposium*, includes a series of presentation papers authored by the primary experts in the field of parking policy, most of which are included in this study (*Appendix A*) as abstracts. The second, "Managing Employee Parking in a Changing Market," also is included in *Appendix A* but is not a study *per se*; rather, the abstract takes the form of a series of quotes from symposium participants.

Additionally, a number of spontaneous and unstructured telephone interviews were conducted during the national search for recent parking studies that may have been done by the more

progressive jurisdictions in the area of parking policy reform and implementation. Interviews were conducted with parking or TDM program administrators in Montgomery County, Maryland; San Francisco and Pleasanton, California; Bellevue and Seattle, Washington; and Portland, Oregon. These interviews revealed that, other than parking inventories, studies on the stand-alone effects of parking policy or policy reforms are no longer being conducted. Rather, parking policies have been fully integrated into overall TDM programs to such an extent that policy analyses no longer are separating out the effects of parking measures within transportation management programs. The studies that are available treat parking policy measures as one of many tools for use in overall traffic congestion mitigation. Therefore, the most recent public sector-sponsored literature does not directly address before-and-after effects of stand-alone parking policy implementation.

Literature Review

The literature review investigates seven aspects of parking policy:

1. parking's role in inducing and sustaining travel related to both pattern and volume, especially with respect to encouraging single-occupant vehicle (SOV) travel;
2. parking's use as a governmental control for land use and zoning;
3. parking's purpose in local government revenue generation;
4. parking's role and function in economic growth and development attractiveness from both public and private sector perspectives;
5. parking's roles in institutional issues such as development financing and joint development;
6. parking's place in the ISTEA era of transportation planning, programming, and funding; and
7. how parking management strategies could be considered as a real option to alleviate traffic congestion.

The books, articles, and papers that are referenced below are all included in *Appendix A--Literature Abstracts*. Each of the publications used was selected for its scope, timeliness, relevance, and importance to this study; yet each is unique, reflecting the authors' area of specialization or interest.

The publications as a group also were chosen for their potential impact on parking policy reform, even though none specifically addressed all of the problems associated with such reform in Dade County. Therefore, each of the articles cited below and abstracted in *Appendix A* can be analyzed only in its own context. However, information gained from reading the abstract or the individual publication in its entirety still may be applied to parking policy formation, administration, implementation, and enforcement in Dade County.

1. Parking's role in inducing and sustaining travel related to both pattern and volume, especially with respect to encouraging single-occupant vehicle (SOV) travel.

According to many of the authors, the simple fact is that "free" (employer-provided) parking is the greatest incentive for single occupant vehicle (SOV) use. However, it was not until studies clearly analyzed the effects and defined the flaws in the use of "more parking" zoning ordinances that this fact could be addressed.

In "Problems with Parking Requirements in Zoning Ordinances" (Shoup & Pickrell, 1978), the authors suggested that the practice of numerical detailing of minimum quantities of parking spaces in parking provision zoning regulations for new developments implies that zoning officers and planners are the final authorities on parking. They indicated the impacts from the use of land-use zoning rules to regulate the SOV user market: zoning requirements created a parking oversupply, encouraging more SOV use; the "rules of thumb" were inconsistent across jurisdictions; and zoning ordinances gave the impression that traffic congestion problems can be solved without the expenditure of public funds. Shoup and Pickrell studied municipal zoning regulations that required developers to oversupply the parking user market in an attempt by public policymakers to mitigate traffic congestion. Well-intentioned planners assumed that more off-street parking would result in more cars being taken off the city streets. The planners did not recognize that the parking user market would react as it did, even though development-induced demand for parking did exist. The unintended consequences of the planners' use of zoning land-

use regulations to affect a traffic-oriented objective supplied evidence to suggest that opposite measures (reducing parking supply) could potentially reduce traffic congestion. Planners began to look at reducing parking supplies to force changes in commuter mode share selections.

Shoup and Willson have been the most productive authors in articulating the inherent traffic congestion problems caused by employer-paid parking. They argue in "Employer-Paid Parking: The Influence of Parking Prices on Travel Demand" (1990) that "free" parking is an insidious form of subsidy that supports the myth of "one man/one car" and encourages the single occupant vehicle commute. Shoup and Willson developed the concept of the "parking cashout" where employers would be required to offer employees the option of taking the fair market value of their subsidized parking as a taxable cash travel allowance. Individually and collectively, the two authors successfully promoted federal tax policy revisions aimed at discouraging SOV use and expanding the implementation of carpool/vanpool programs. The authors' "Employer-Paid Parking: The Problem and Proposed Solutions" (1992) argued for federal taxation of "free" employer-paid parking to discourage SOV use. The Internal Revenue Service (IRS) made some parking-oriented tax law revisions effective for 1994 (*Internal Revenue Code section 132 [f]*).

Any reading of parking-related publications reflects the contention that parking availability and cost (the supply) are the dominant variables in the decision-making process affecting parking user behavior (the demand). This contention appears throughout the available literature, and virtually every publication cited in this section, *Appendix A*, and the bibliography could have been included under this aspect of the literature investigation

2. Parking's use as a governmental control for land use and zoning.

The traditional link between parking policy and zoning ordinances had been forged by the user-driven concept of "more parking." That is, zoning code ordinances required certain parking supply provision minimums so as to ensure sufficient quantities of parking to accommodate peak parking user demand at every site--residential, commercial, industrial, medical, educational, etc. Planners assumed that the provision of "sufficient" parking supply to handle peak parking demand would help alleviate traffic congestion. As Shoup and Pickrell explained in "Problems with Parking Requirements in Zoning Ordinances" in 1978, this policy had resulted in an unintended--

and opposite--consequence. The oversupply of "free" parking that had been created by zoning minimums had simply encouraged more citizens to commute alone.

The development of parking-related zoning ordinances is a delicate balancing act between planners and developers, parking users, and public officials. Thomas Smith recognized that delicacy in *Flexible Parking Requirements* (1983). Since these zoning policies were such a balancing act, Smith suggested that flexibility in parking requirements could be used to affect parking user behavior. Zoning ordinances that accommodated various land uses, differing temporal (daily, weekly, seasonally) peak demands, transit proximity, and ridesharing programs were necessary to manage the balance problems. The article included examples of innovative (at that time) and flexible ordinances, and its publication enabled the American Planning Association (APA) to spread the word on flexibility.

Smith and Hekimian based "Parking Requirements for Local Zoning Ordinances" (1985) on their study of parking policies in Montgomery County, Maryland, in the early 1980s. This study covered four land uses with the intent of developing flexible parking regulations that would accommodate various densities, parking patterns, and travel mode shares within each use. Along with the four land uses (office buildings, retail, hotels, multi-family residential), the authors also addressed the problems of shared parking, downsized cars, and parking maximums. Smith and Hekimian developed four prerequisites in working out shared parking recommendations and presented a six-point program to accommodate mixes of car sizes through a "universal" parking space size recommendation. They felt that the internal economics within the suppliers' own marketplace (land and parking space construction costs) were the limiting determinants of any parking supply provision quantities that would be over zoning-required minimums. The authors called for the use of localized and flexible requirements and accurate assessments of actual parking needs.

McCutcheon and Hamm studied the effects of using parking provision regulations based on environmental protection legislation in "Land Use Regulations to Promote Ridesharing: An Evaluation of the Seattle Approach" (1983). The Clean Air Act was environmental legislation that had profound effects on traffic congestion mitigation programs. However, Seattle's use (in the late 1970s) of the environmental review process to force parking provision quantity changes by developers was perceived by the authors as inappropriate. While requiring preferential parking for high occupancy vehicles (HOV) and restricting total parking quantities for new developments

was an effective method for discouraging SOV use, the environmental regulation instruments chosen for implementation simply did not work because the Seattle instrument was weak, unattractive to developers and virtually unenforceable.

The Institute of Transportation Engineers (ITE) developed a supplement to be used with *Parking Facilities for Industrial Plants* and the parking supply provision "bible," *Parking Generation*, that updated some sections of both publications. *Employment Center Parking Facilities* (ITE, 1988) summarized the changes in parking requirements due to ridesharing mode use increases since the oil crises of the 1970s. This work indicated that local parking space provision zoning ordinances needed to be adjusted to reflect the reality that nearly 20 percent of employees at some work centers used some form of ridesharing. The authors felt that zoning ordinances could allow reductions in parking space requirements where employers actively promoted ridesharing to discourage SOV use. ITE also observed that there were five criteria on which to base zoning variances regarding parking supply provision in new developments, and an additional five factors that affected parking user demand at particular employment centers. It suggested that the "rule of thumb" used by many zoning boards in developing parking requirements was inadequate to fit a variety of employment center situations.

Swanson focussed on the need for flexibility and adaptability in parking-related zoning regulations in "Parking: How Much Is Enough?" (1989). He argued that regulations should be based on cooperation, adaptation to specific needs, and situational monitoring. He also suggested that a proactive stance towards flexibility in parking supply requirements when an employer wished to actively promote a ridesharing program was a better method than requiring zoning variance hearings. The author indicates that states suffering from automobile overdependence (Texas, Florida, California) should be the most innovative in parking policy-making and ordinance implementation. He also provided examples showing the folly of any jurisdiction that simply copies the parking requirements of another. The implications for Dade County, however, are not that every jurisdiction needs to develop its own parking supply provision ordinances; on the contrary, it would seem much more reasonable to create a single, flexible, countywide parking policy.

The Seattle Commuter Parking Symposium brought parking thought forward through the many papers included in its *Proceedings*, including Kiran Bhatt's "Local Zoning Codes and Parking Supply" (1990). Bhatt systematically analyzed the parking policy potential in zoning regulations.

He listed seven promising parking supply policy measures and five localized conditional variables that might affect the effectiveness of these measures. Along with nine key issue areas, Bhatt also recommended four policy directions. Of importance to Dade County, the author indicated that suburban communities offer some of the best opportunities for parking policy reform measures like reduced minimums. This is because suburban parking is generally oversupplied, suburbs are often sites of new mixed-use developments, and the natural market may take a long time to mature, if ever. On the other hand, he suggests that urban areas may benefit from other strategies, such as employer cashout, increased parking costs through parking taxes or differential pricing, developer "in-lieu of" payments, or reduced parking requirements for developments in proximity to transit stations.

Willson addressed suburban parking policies through case studies of ten suburban Los Angeles area worksites for *Suburban Parking Economics and Policy: Case Studies of Office Worksites in Southern California* (1992). The study presents six policy options with the warning that convincing the various actors of both the need for and benefits of parking reform can be accomplished only through a concerted education program and consistent public sector parking policy implementation. His recommendations for local governments include as one option the elimination of minimum parking requirements and then letting the "market" determine supply. However, if parking minimums are seen as a necessity, then five factors must be accounted for: (1) actual cost-reflective parking user pricing; (2) specific office-use characteristics; (3) the surrounding land uses; (4) proximity to transit; and (5) employee density. Willson recommended programs to educate developers on actual parking costs and needs, opportunities for shared parking, ongoing transit programs (including TDM and TMAs), and public/private cooperative efforts. Additionally, Willson saw a need for public transit operators to expand their efforts to influence parking policy in the city planning and development approval process to encourage reductions in parking supplies, transit-friendly design, and transit support in general.

Zoning ordinances across the country no longer need address the parking issue from the traditional user-driven perspective. Flexibility in parking provision requirements has been put forward as a new paradigm in parking policy. However, inherent in a fragmented jurisdiction such as metropolitan Dade County are difficulties in implementing policy in one location if there are competing policies in other jurisdictions. When a developer compares parking ordinances across jurisdictions, even if parking policies are similar, confusion (and the potential appearance of conflict) may arise due to different interpretations of ordinance language, categorizations, and

vocabulary. The municipal ordinance review (*Part III--Regulations Discussion*) and *Appendix C--Municipal Parking Ordinance Matrices*, indicate the differences in categorizations and provision requirements from jurisdiction to jurisdiction in Dade County.

3. Parking's purpose in local government revenue generation.

When the subject of parking revenue generation arises, first thoughts usually turn to parking meters. However, there are more aspects to this area than curbside meters (and Meter Maids). Among these additional aspects are: increasing pay-for-parking user turnover; raising fees for municipal parking lots to increase revenues; aggressive enforcement of existing on-street metered parking; increasing parking violation fines; installation of more parking meters (both on- and off-street); and other traditional parking revenue generation methods. However, the so-called "parking tax," that is, a tax imposed directly on parking users above existing parking charges, has attracted the most attention in recent years (even though parking taxes have existed in some jurisdictions since 1937) as more cities seek to both increase revenues and affect parking user behaviors.

The 1990 Seattle Parking Symposium produced three papers on this subject. In his "Proposal to Levy Parking Charges in the San Francisco Bay Area", Huerby looked at the use of parking charges to facilitate commuter behavior changes aimed towards meeting the requirements of environmental policies. While the City of San Francisco has had a parking tax in place for some time, the use of such a tax in the rest of the Bay Area to alleviate air quality problems did not meet with much success. In today's era of ISTEA, however, prototype air quality improvement programs that use a parking tax as one facet may be able to attract federal funding.

The second paper, "Proposed Parking Tax for Montgomery County, Maryland" (McGarry, 1990), was the story of a failed parking tax initiative. This represents a good example of the need for "political prepositioning", that is, the necessity to educate the public and the important actors to the importance of a particular problem before any attempt is made to implement a solution, particularly one involving an economic disincentive like a parking tax. This is a critical lesson to be learned about parking policy implementation in general. Unless and until the public recognizes parking problems and develops these problems into a clear parking policy issue, it will not readily accept the need for any form of solution.

The third paper from the symposium, "Parking Tax Discussion Paper" (Ulberg, 1990), also is pertinent to the possible introduction of a parking tax. In this paper, Ulberg argues that the revenue generation potential of a parking tax is greatest when applied jurisdiction-wide and on all parking and parking users. In order for this to be accomplished in Dade County, there would need to be a countywide parking authority to present the facts outlining the parking problem; educate the public and the important actors to the need for a solution to the parking problem; provide a mix of alternative solutions and outline "accomplishable goals"; lobby the State Legislature for statutory revenue enhancement powers; monitor parking programs and make adjustments; maintain an ongoing public promotion program; and form the basis for countywide cooperative efforts.

The City of Portland, Oregon, has had a "parking cap" in place for a number of years but recently decided to increase the overall number of parking places in the city to accommodate more growth. Yet, they were still faced with the risks of debasing ambient air quality by simply allowing "more parking." The City's *Parking Tax Survey Update* (TRI-MET, 1992) developed by the regional transit authority (TRI-MET), is an overview of the effects of parking taxes in other jurisdictions. While no decision has been made regarding the implementation of such a tax on Portland's parking users, the revenue generation potential (actual and estimated) of such a tax is exceptional.

4. Parking's role and function in economic growth and development attractiveness from both public and private sector perspectives.

One of the most difficult aspects of parking policy reform is the necessity of addressing certain parking "myths," including the role of parking in development attractiveness. Across the world, office developments continue to be built in urban central business districts in both the absence of "sufficient" parking and the presence of "over-priced" parking. Yet, within the boundaries of some jurisdictions an innate fear of the effects of parking policy reform on development has thwarted such reform.

It is possible that there also is a lack of communication between the various actors. Lenders want a return on their investment, while developers want their development to be successful (fully leased) in order to pay off the lenders and then make profits. At the same time, employers want

to pay as little as possible for their facilities so that they may maximize their profits and employees want easy access to worksites such that they may spend as little as possible to obtain their earnings. Each wishes to maximize his or her returns and minimize expenses. The myth of "free" parking has resulted in lenders, developers, employers, and employees all thinking that they have been getting something for nothing. Yet, parking that does not generate revenue slows down the rate of return for lenders, wastes development capital and space, is a hidden cost for employers, and is a subsidy for only certain employees.

The fears that public administrators have regarding parking policy reform must be faced. "Automobile Parking Trends" (Wilbur Smith, 1983) indicates that, through communication of community objectives to all of those involved, through the use of innovative and flexible parking policy instruments, and by tailoring new or changed parking policies to the individual jurisdiction, these myths may be addressed.

The national survey included as *Appendix A* of the National Association of Industrial and Office Parks' (NAIOP) "Parking for Industrial and Office Parks" (Casazza, 1986) suggests that there needs to be more such communication between private sector developers and lenders on one hand and governmental zoning and planning personnel and parking authority administrators on the other. Only by developing an areawide interest in parking policy and encouraging consistent policy administration can developers, lenders, employers, and public administrators cooperate on reducing wasted space that is given over to underutilized parking. At the same time, these actors also may be engaged in creating opportunities for increased commuter usage of alternatives to the single-occupant vehicle and for assisting traffic congestion mitigation programs. There are enough presentable economic incentives available to influence lenders and developers into rethinking the mythical effects of parking "rules of thumb"; however, they do not have the information available to them that is available to public agencies. Before parking policy reform can take place, an intensive, jurisdiction-wide educational program must be implemented.

As one example of the tools available to educate the private sector, ITE's "Guidelines for Parking Facility Location and Design" (1990) shows how less space may be given over to parking simply by adjusting parking space size to meet the size mix of current commuter fleets.

Beyond simple physical changes in parking space size lies the realm of attitudinal adjustments. The 1993 Seattle Parking Symposium, "Managing Employee Parking in a Changing Market," shows how the education process can be implemented. The public sector sponsors of the

symposium were able to gather the private sector together in order to develop understandings of each others' real (as opposed to imagined or mythical) needs and issues. The necessity of interaction and mutual education is paramount for policy reform.

5. Parking's roles in institutional issues such as development financing and joint development.

There are myths in both the private and public sectors regarding parking's role in development issues. One of the myths, the economic importance of parking to developers and lenders, was succinctly addressed in "Leasing Practices and Parking" (Valk, 1990), from the 1990 Seattle Commuter Parking Symposium. Valk clearly shows the circular nature of the argument that parking reform has negative impacts on development. Yet, until developers (and lenders) are presented with parking facts, they will continue to operate at an economic disadvantage to their own goals. More than any public sector plea to private sector civic responsibility, addressing developers' own self-interest can be the greatest persuader towards cooperative parking reform efforts. The public sector is armed with information on the real issues and effects of parking policies, and until the private sector is brought into the "information loop" myth will obscure and obstruct parking policy reform.

Although the abstract of the 1993 Seattle Parking Symposium, that is included in *Appendix A* covers primarily the statements of the public sector, the degree of cooperative effort between the public and private sectors in the Seattle area comes out in a reading of the entire text. The extent of communication between these sectors in the Seattle area clearly shows that this relationship need not be an adversarial one. There are cooperative efforts extant in the most progressive parking policy jurisdictions.

The case studies in Flynn and Glazer's "Ten Cities' Strategies for Transportation Demand Management" (1989) show the divergent results between public/private cooperation (Seattle and Bellevue, Washington; Portland, Oregon) and public sector imposition (Sacramento and Los Angeles, California; Orlando, Florida) of parking management programs. Additionally, the NAIOP survey in Casazza's "Parking for Industrial and Office Parks" (1986) shows the potential that communication between public administrators and private sector actors has to create a cooperative relationship in the area of parking policy.

One of the most important goals of parking policy reform is myth destruction. The most important tools to reach this goal are education and communication. In order for Dade County's public and private sector actors to accomplish these tasks they must cooperate. There are myths rampant in both the public and private sectors regarding the nature (and even the existence) of parking "problems"; parking's role in development issues; determining the institutions and instruments appropriate to address the "problems"; and parking policy-making, administration, and enforcement.

The literature directly addressing joint development issues is less than scant. However, the potential for site-specific parking policy reform measures that is opened up by public/private joint developments at major transit facilities is extensive. Future major transit infrastructure developments (high-speed rail stations and intermodal nodes, in particular) offer opportunities for planners in this area. Because joint public/private transit-based developments are a possible future issue in Dade County, research should be undertaken as early as possible.

6. Parking's place in the ISTEA era of transportation planning, programming, and funding.

The literature available on parking policy makes no direct reference to the impacts of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). However, there would appear to be opportunities to obtain federal funding of parking policy-related pilot programs under the Congestion Mitigation and Air Quality Improvement Program without designating the metropolitan Miami area as a major non-attainment zone. By placing parking policy reform under the Metro-Dade MPO for projects implemented after FY 1996, start-up and pilot project TMAs may be made more attractive to both the public and private sectors.

ISTEA is probably the most important new federal legislation aimed at promoting parking policy reform, and this area deserves deeper study. According to *ISTEA Year Three* (1994), ISTEA "...allows local communities and states to select transportation programs that make sense in the context of community goals and plans and it provides the funding flexibility to deliver the alternative selected through that process." Approximately \$6 billion is available through FY 1997 under this section of ISTEA.

From the congestion mitigation/air quality improvement point of view, the use of TDM programs may be most applicable to this sector of ISTEA planning and funding provisions. However, directly tying parking policy reform and air pollution can become a "stretch," as indicated by McCutcheon & Hamm (1983) and Huerby (1990). Nevertheless, using air quality as one factor in TDM program justification can create a more cooperative effort, as in Pleasanton, California (*Information Report 9C: "Results of the Transportation Systems Management (TSM) Program and 1993 Alameda County Congestion Management Agency Transportation Survey,"* 1994), Portland, Oregon (*TRI-MET Parking Tax Survey,* 1992) and Seattle and Bellevue, Washington (*Rideshare/Parking Management Program Handbook,* 1994).

An overview of six (out of ten) case studies of municipal TDM programs using parking policy provisions is abstracted from "Ten Cities' Strategies for Transportation Demand Management" (Flynn & Glazer, 1989). These examples indicate the range of programs and the variety of impacts. Ferguson's "Transportation Demand Management: Planning, Development, and Implementation" (1990) calls for implementation of TDM programs early in the development cycle.

The relationship between TDM programs (including those that do not address parking policies) and the funding provisions of ISTEA deserves closer investigation.

7. How parking management strategies could be considered as a real option to alleviate traffic congestion.

Parking management is not the only answer to traffic congestion mitigation. However, parking management is one of the most significant tools in the traffic congestion mitigation toolbox. Parking management strategies include peak-period pricing, transportation demand management (TDM) programs, and the parking tax.

Parody looked at peak-period pricing in "Implementation of a Peak-Period Pricing Strategy for CBD Parking" (1984), a study of parking management strategies in Madison, Wisconsin. However, Madison was a unique situation in that all parking supplies that were available to the general public were controlled by the Parking Utility department within the City Transportation

Commission (which also had responsibility for transit, taxicabs, bicycle and pedestrian facilities, and traffic engineering).

Flynn and Glazer gave an overview of TDM programs in "Ten Cities' Strategies for Transportation Demand Management" (1989). This paper presents ten case studies in the implementation of demand management programs, some of which addressed use of parking policies as strategic tools in the instigation of TDM programs.

The City of Pleasanton, California, used a transportation systems management (TSM) ordinance to implement a traffic congestion mitigation program. Various parking-related measures were included (with others) in an attempt to reduce traffic-generated impacts. Broad implementation, cooperative public/private programs, articulated goals, and provisions for program enforcement have made Pleasanton one of the commonly cited jurisdictions with successful congestion mitigation programs. The city's self-review of this program, "Results of the Transportation Systems Management (TSM) Program and 1993 Alameda County Congestion Management Agency Transportation Survey" indicates that it is now looking towards adding employer cashout and parking tax instruments.

Another successful program is presented by the City of Bellevue, Washington, in its *Rideshare/Parking Management Program Handbook* (City of Bellevue, WA: 1994), where an aggressive ridesharing promotion program is included with parking supply management measures.

Ulberg's "Parking Tax Discussion Paper" (1990) is included under number 3 above. Ulberg, however, looked at the parking tax as not only a revenue generator, but also as a TDM strategy, as long as the actual parking users are the ones who are directly affected by the tax itself.

Of as much importance as individual studies was the *Proceedings of the Commuter Parking Symposium* (Municipality of Metropolitan Seattle, 1990). Using grants from the Urban Mass Transportation Administration (UMTA), the Federal Highway Administration (FHWA), and the Association for Commuter Transportation (ACT), the Municipality of Metropolitan Seattle (Metro) assembled, for the first time, a group of recognized experts focusing on the topic of parking policy reform. Many of the papers presented at that conference are mentioned throughout this study. The symposium developed four policy initiatives, twelve challenges, and ten "astounding facts". An abstract of the *Proceedings* preamble is included in *Appendix A*.

In order to select parking management instruments, measures, and techniques, it is necessary to develop a methodical approach to policy-making. This decision-making process is complicated due to the inter-relatedness of various parking issues on the many actors. Kuner's "Downtown Parking Policy Analysis" from *Transportation Quarterly* (October 1983), is a descriptive primer on policy analysis methodology directed at parking policy in particular. He indicates that parking policy-making is a difficult process due to the diverse and legitimate concerns of the various actors and the perceptions that parking policy issues can be controversial, that alternatives may be overlooked, and that systematic or cost-benefits analysis methods are cumbersome and inexact. Kuner simplifies parking policy issues by recognizing that parking is "a system in and of itself," described in terms of supply and demand, and he suggests a matrix approach to parking policy analysis.

Summary Review of Abstracted Literature

The primary findings of the literature review are:

1. Parking policy can have profound effects upon single occupancy vehicle use as a commute mode, and parking pricing policies are the most effective tools in reducing SOV use by commuters. Negative parking policy (quantity restrictions, price increases, parking taxes, etc.) are not effective, however, if positive commuter mode choice alternatives are not concurrently offered. Parking policy reform must be offered in a "win-win" situational context.
2. Parking policy can be a tool towards government control of land use and planning programs; however, it is only one tool in the planning toolbox. Past mistakes in the use of zoning regulations to affect parking user demand behavior make parking reform a "difficult sell." An areawide parking policy education program that includes state, county, and municipal officials; developers, lenders and employers; public and private sector employees; and other affected parties has the best chance of producing the best policy.
3. Parking can be a valuable revenue generation resource; however, some degree of public sector control of the parking market is an obvious prerequisite to such generation. Metered on- and off-street public parking, a parking tax, vigorous enforcement of parking statutes and ordinances, and areawide regulatory authority are the best assets to developing such market control. While political judgements will determine how much control is possible, a clear presentation of the benefits of parking policy reform can make the political decision-making process less controversial. By mandating that parking-generated net (after implementation and enforcement cost) revenue be directed towards transit, the citizen is offered a free market choice: to pay for parking and subsidize transit, or use transit and reap the rewards from others' parking payments.
4. The role of parking in economic growth and development attractiveness has been one wrapped in myth and a basic lack of both understanding and communication between and among the actors involved. Modern economic circumstances have

presented the public sector with an opportunity to change the private sector's perceptions. Lenders and developers demand more precise estimates of the actual return on their investments, and the primary focus of the re-education process must be this one simple fact--there is no such thing as "free" parking. When employers recognize that the actual cost to them for supplying free parking to their employees can be the same as supplying company-paid health care, employers are much more inclined to assist public sector parking policy reform. Again, public sector education of the private sector is the key to parking policy cooperation.

5. Areawide parking policy reform, the education of the private sector and intergovernmental cooperation can be used as a focal point for positive approaches to the institutional issues circulating around development financing and economic growth. Other geographic areas that have been the core instigators of progressive and comprehensive parking management/transportation program development policies have not suffered in the least from parking policy reforms. On the contrary, positive quality of life and civic responsibility issues have tended to overcome negative first impressions of parking policy reform. Progressive parking policy can be turned into a positive selling point for metropolitan Dade County, too.
6. Although the available parking policy literature makes no reference to the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), there would appear to be opportunities to obtain federal funding of programs under the Congestion Mitigation and Air Quality Improvement Program. By placing parking policy reform under the Metro-Dade MPO and using ISTEA funding, start-up TMA's may be made more attractive to both the public and private sectors. The role of ISTEA in parking policy reform and implementation deserves deeper investigation.
7. Parking management is not the solution to traffic congestion. However, it is one of the most important of the many tools available in traffic congestion mitigation. By ignoring parking policy reform, the single occupant vehicle will continue its dominance in Dade County. Parking policy reform by itself simply may chase parking users around the county, never actually helping alleviate congestion.

However, the recognition that parking policy reform combined with intelligent overall transportation policy implementation is the only method of addressing the traffic congestion dilemma is paramount. Without including parking policy in the Dade County transportation picture, any efforts directed at traffic congestion mitigation will be potentially less successful than they could be if parking policy is included. Parking policy reform is not an option; it is mandatory.

Overall Review of Parking-Related Literature

Any parking policy has to be based on its effects on parking users. Secondary effects (and unintended consequences) may be noted in policy relationships with secondary actors (developers, owners, lenders, architects, designers, engineers, contractors, operators, etc.). Historically, parking policies also have been used to advance other public policies such as economic development, traffic congestion mitigation, or air pollution abatement, for example. But the direct consequences of public administration decision-making regarding parking policy rest between the two primary actors: the decision-makers and the users.

Until recently, parking policy was "user driven"; that is, the perceived user demand determined the policy, and policy determined that this demand must be met through statutes, ordinances, and regulations which set minimum limits on required supply. Other rules covered parking space sizes, layout of spaces, landscaping, fire protection and security requirements, and other technical items. Such rules and regulations were designed to require, support and sustain parking supplies to meet user demands. While meeting perceived parking user demand was the dominant paradigm governing parking policy decision-making for decades, other issues have since arisen and drawn attention to the effects of parking policy on myriad areas. These include traffic congestion, air pollution, petroleum dependency, quality of life, urban sprawl and suburban infill, development and redevelopment, governmental economics, and other social complications.

The literature of the 1950s through 1970s addressed accuracy in estimating user demand and the provision of supply to meet that perceived demand. The issues of the 1980s through today created a literature that revolves around adjusting parking supply--or supply costs--to modify parking user demand behavior.

In general, this recent literature falls into two categories:

1. field experiments designed to test hypotheses, and
2. field experiments designed to gather data.

Test Hypotheses

These fall into six areas:

1. the effectiveness of parking policy decisions in supplying sufficient parking space to meet parking user demand;
2. the effectiveness of parking policy decisions in modifying parking user behavior by forcing supply below demand;
3. the effectiveness of parking policy decisions in modifying parking user behavior by economic adjustments to parking user costs;
4. the effectiveness of parking policy decisions in concert with other transportation policy decisions in modifying parking user behavior;
5. the effectiveness of non-parking policy decisions in modifying parking user behavior; and
6. future projections of parking user demand.

Gather data

These fall into eight areas:

1. accurate counts of parking supply and/or use;
2. data analysis of parking user behavior and attitude;
3. economic analysis of the costs of supplying and/or operating parking spaces;
4. physical size requirements for parking space design and construction;
5. technical or aesthetic factors in parking construction and maintenance;
6. collection and comparisons of parking-related statutes, ordinances, regulations, and rules;
7. comparative analysis of parking policies across jurisdictions; and
8. investigative methodology development.

Much of the available literature of the 1980s and 1990s was reviewed for this study; however, constraints of time and space prevented a complete written synopsis of all of the known recent publications. The extensive bibliography included with this study provides a reference for those wishing to study a particular aspect of the subject in greater detail.

Implications

Certain implied elements seem to appear with some consistency throughout the available literature on parking policies:

1. Jurisdictional bodies must determine that, even though they may not appear to have a parking problem, they may actually have a "hidden" one, due to lack of communication between parking users, providers, and regulators. On the demand side, when actors expect to be provided with "free" parking (commuters), or cheap and convenient parking (shoppers, visitors, tourists), or lucrative parking (public or private parking managers), then as long as their status quo is maintained there does not appear to be problems. Yet, the maintenance of the status quo continues to waste valuable land areas, contribute to environmental degradation, restrain efficient development, deter mass transit usage and exacerbate traffic congestion. The problems caused by a lack of an overall parking policy do become visible; they are simply not directly connected to one source.

On the supply side, when parking providers conclude, without any specific evidence, that "the market" calls for certain parking quantity standards, and they then supply parking to these perceived "market" standards, the providers' assets (land, capital and interest, maintenance and security costs, etc.) are sometimes squandered on underutilized space. Reliance on the "market" and its rules of thumb is no longer sufficient to supply a less-than-adequately understood demand.

In fragmented jurisdictions, these problems actually are enhanced by a lack of an overarching, cohesive, flexible and cooperative parking policy that is applied with consistency and pragmatism as part of a unified overall transportation program. Fragmented jurisdictional areas--as much or more than central business districts--need a centralized source for information, policy direction, rules and regulations, ordinances and enforcement, and, especially, one communication/education nexus.

2. Certain areas of the country appear to have determined that parking policy needs to be integrated with overall transportation policies. The West Coast is at the forefront of this policy-making and implementation change. Cities in the San Francisco Bay (Pleasanton)

and Los Angeles (particularly Irvine), California, areas; Portland, Oregon; and in the metropolitan Seattle, Washington, area (notably Bellevue) continuously appear in the literature as examples of innovative and cohesive policy development, implementation, administration and enforcement. These areas, for various reasons, have chosen not to maintain the status quo, and instead have attempted to make adjustments or changes in their approaches to parking policies.

The cities that appear to have the best opportunities to create functional and progressive parking policies also appear to have some consistent elements in their makeups: they tend to be "rail" cities, with public rapid mass transportation systems; they have had locally recognized parking problems; they have been experiencing rapid economic growth; and they have areawide mechanisms in place for the development of systematic problem-solving programs in a range of issues. In the eastern states, only the area around Washington, D.C. (Montgomery County, Maryland) is mentioned to any great degree. One would expect that this is due in no small part to the systemic effects of the decades-long economic decline of the major cities of the northeast and a history of experience with rail, subway, or bus commuting in general in those areas, as opposed to the one-man/one-car mindset of the south and west. Cities in the south and west grew concurrently (and often because of) the Automobile Age, and it may be argued that this historical context should have offered a better opportunity to develop parking policies. The older cities of the east were more centralized, and the automobile was a retrofit on the dense urban landscape. For the eastern cities, congestion issues were more dominant than parking issues.

3. Areas that have existing public mass rapid transit systems appear to have recognized that changes in parking policies have limited (but generally positive) effects on transit ridership mode share. They have realized through their experiences that adjusting or modifying parking policies may result in mode shifts in commuter travel methods, but may not significantly affect increases in mass transit shares. However, careful controls placed on parking in and along transit corridors may be able to affect transit shares to a greater degree than areawide parking policy changes.

When many urban public mass transit systems were first implemented, the central business district was the economic hub of the urban area and the transit corridors operated as

feeder spokes into and out of that hub. With the changes in the overall economic picture in the United States, and in particular the movement from manufacturing to service industry predominance, a resultant (but delayed) shift in commuter patterns was observed. This shift tended to be away from the hub-and-spoke pattern to one of intrasuburban traffic. That is, rather than a commute from a suburban residential area to an urban manufacturing site, the recent trend is towards a commute from one mixed-use (office/residential) suburb to another mixed-use suburb. This represents a change that has a negative effect on mass transit, which is more effective at serving centralized locations.

There would appear to be, however, an opportunity to create mixed-use nodes within the existing mass transit corridors, and parking policy flexibility may become one inducement for developers to assist in that movement. Developers who are given economic incentives within these existing corridors by not having to provide expensive and often underutilized-parking spaces on valuable land may become the catalyst for expanded transit system share increases.

4. Spatial consideration is another area of parking policy that parking regulators need to address. The typical commuter car is no longer the Chevrolet Impala of the 1960s, requiring a standard stall 10 feet wide and 25 feet long. By adjusting parking stall sizes to fit smaller cars, the standard parking stall would become 8-1/2 feet wide and 15 feet long, accommodating more vehicles in the same parking lot footprint.

One of the future items that may affect parking policies would be growth of consumer interest in so-called "micros" or "city cars." These ultra-compact, high-efficiency vehicles create the opportunity to roughly double the total vehicle capacity of existing parking supply. Through the capability of parking three micros in the same square footage now commonly used up by two full-sized vehicles, city cars may increase commuter numbers while having virtually no effect on highway levels of service. However, the reluctance of American commuters to downsize their vehicles would tend to put this revolutionary shift further into the future here, as opposed to Europe or Asia, where micros have been making inroads for some time.

5. Parking policy measures that appear potentially most successful in modifying parking user behavior seem to be (in no particular order):

- Those that are combined with transportation alternatives, because if alternatives to SOV use are not offered, then parking policy changes may tend to be ineffective at best and counterproductive at worst.
- Those which take into consideration the effects of parking policy reforms on as many actors as possible.
- Those that increase the user cost of parking.
- Those that are based on accurate estimates of parking user demand based on development size, location, and proposed or anticipated land uses.
- Those offering preferential spatial or economic treatment to carpool/vanpool participants, a direction taken by many TDM programs.
- Those that implement restrictions on the minimum and maximum parking supply quantity requirements in transit corridors (this must be approached very carefully and warrants further research).

Policy Effects

Parking policies can be used to affect the two primary aspects of the parking market: supply, the quantity of parking spaces available in a given area; and demand, the number of parking users within that area. Parking regulations have traditionally been directed towards ensuring sufficient fixed supply to meet a variable demand--a difficult task at best and an unattainable goal at worst. On the supply side, the recent escalation of the costs involved in parking supply provision (land acquisition, development, financing, construction, operation, maintenance, safety, security, and liability) has created a real-market-oriented opportunity for public administrators to affect changes in developer/employer perceptions as to the relative importance of pseudo-market-based rules of thumb relating to parking supply. On the demand side, parking policies must be designed in

conjunction with alternatives to the SOV travel mode. These may include carpool or vanpool programs, preferential treatment of HOV modes, public mass transit, flexible work hours or telecommuting, or similar user attractors. Economic disincentives based on the price (per hour, day, month, year) that parking users are willing to pay to park also have an effect on demand.

Secondarily, parking policies can affect commuter residence location and travel mode selection choices, localized land use, and relations between the various actors affecting or affected by those policies. However, it is important to point out that these secondary effects depend on three aspects: the personalities of the actors, the degree of communication between and among the actors, and the local environment. Parking policies can affect--in limited and variable degrees, depending on the local situations--alternative commuter mode shares by increasing the number of carpoolers; increasing transit share; decreasing the numbers of SOVs; or increasing the number of telecommuters. In fact (also depending on local conditions) parking policy changes may increase carpool commuter share and decrease transit ridership at the same time. Until changes in parking policies are implemented, however, no empirical evidence can be obtained as to which (if any) of these increases/decreases will actually occur. This requires active, consistent, and comprehensive monitoring of before and after parking supplies, parking user demand data and commuter attitudes.

Parking policies can affect the physical amounts of public and private land space given over to parking. There is a domino effect related to this facet of land use regulation. For example, increases or decreases in the land "footprint" surrendered to parking lot use affects rainwater runoff, which affects storm sewer and catch basin placement, which affects retention area construction and lift station design capacities, which affects municipal capital outlays, etc., etc. Other physical effects involve air quality, light pollution, criminal activity, urban redevelopment, and local construction costs.

Parking policies can have positive or negative effects on the relationships between developers, lenders, and employers on one hand, and public officials and administrators on the other. Additionally, they can have positive or negative effects on the relationships between commuters, visitors, and tourists on one hand, and these same public officials on the other. Changing the parking capacity rule of thumb in local development can have effects on attitudes as much as on traffic or land use. The effects of parking policies in these areas--both primary and secondary--can be presumptively predicted but they cannot be explicitly foretold.

Summary

All of the parking-related literature that was read, reviewed, or abstracted for this study collectively paints a picture of interconnectedness. That is, no individual parking-related policy or strategy, instrumental measure, regulatory statute, or ordinance stands alone. Just as there is an interconnectedness between parking supply and user demand, so, too, there are complicated interrelationships between the actors involved in the inputs and outcomes of parking policy decisions.

Public officials and administrators must take into account the delicacy of the balancing act that parking policy-making entails. The public policy issue remains unchanged since the introductory pages of this study: How to balance the needs of parking users with publicly mandated goals such as improved access to places of employment or markets, traffic congestion mitigation, and air pollution abatement. Remaining, too, is the central public policy question: *How much parking is enough to satisfy commuters, visitors, shoppers, developers, and public policy objectives?*

The literature does not provide the answers. What it does supply is information so that the public sector decision-makers can make attempts to find a satisfactory balance of the various aspects of this issue.

III. REGULATIONS DISCUSSION

State Statutes

The overarching state statutory question regarding parking policy involves one of determining which one (or combination of) representational government levels may, or is required to, assume responsibility for parking policy. That is: Upon which governmental level (state, county, or municipality) is parking policy development, implementation, administration, and enforcement presumed to be empowered?

First, it does not lie with the State of Florida. The State statutes primarily address roadway parking violations and handicapped parking space violations (*ss.316.194* through *316.1967*). Except as stated in *ss.316.1955*, *316.1956*, and *553.505*, which require that parking supply for the physically disabled conform to the Federal dictates included in the Americans with Disabilities Act (ADA), the State does not address any mandated parking quantities. The State has assigned all other parking policy responsibility to the counties (*s.125.01[1][m]*), and, to a much more limited degree, to the municipalities (*s.170.01[1][g]*). Therefore, in the case of a county that has a large metropolitan area (1955 square miles), a number of large and small municipalities (27), and a substantial unincorporated area, upon which "government within government" does the responsibility for, and authority over, parking rest?

The State statutes give broad powers to the counties to go along with the assignment of equally broad responsibilities. Counties may join with municipalities to create special districts (*s.125.01[1][p]* and *(5)[a]*) to jointly perform these functions, including the creation of special tax districts (*s.125.01[1][q]* and *[5][c]*) to finance these joint efforts, if such special tax districts are approved by referendum vote of the electorate. Conversely, municipalities or their citizens may request the formation of such special districts (*s.125.01[6][a]*). In the case of Dade County specifically, the Metropolitan Planning Organization (MPO) has the power to "...provide and regulate parking facilities; and develop and enforce plans for the control of traffic and parking..." (*s.125.01[1][m]*) and to develop a comprehensive plan which includes an "...element for the development of off street parking facilities for motor vehicles..." (*s.163.3177[7][d]*). Therefore, it would also follow that along with this planning responsibility should come regulatory authority over parking policy within the county through land development regulations (*s.163.3202[2][h]*).

It does not appear then, from a simple but liberal reading of these statutes (*s.125.01[3][a]* and *[b]*), that these county powers are restricted to unincorporated areas of the county only (*s.163.3171[2]*), and there would seem to be a potential to create a countywide parking policy under the statutes of the State of Florida. This is not to say that it would be necessary to usurp the powers of municipalities to regulate parking use within their jurisdictions. Rather, a cooperative program should be developed under the umbrella of the existing MPO structure. To look at the parking situation in Dade County requires a three-tiered approach: first, an examination of the institutions with parking responsibility; second, an examination of the parking policy instruments available to regulating authorities; and, third, the logistics of parking policy implementation.

Institutionally, the power to regulate parking in the unincorporated areas of the county falls directly on the County government itself (*s.125.01*); additionally, the County has original jurisdiction over parking on property owned or leased by the county which is located within the boundaries of chartered municipalities (*s.316.006[notation]*). Municipalities have only been statutorily given jurisdiction over on-street parking, that is, "...with respect to streets and highways under their jurisdiction..." (*s.316.008[1][a]*). The various parking ordinances in effect in the many municipalities of Dade County may tend to give the impression that all zoning for off-street parking is within the scope of municipal regulatory powers, and yet, this could be argued as inconsistent with Florida Statutes.

Although the element of *Title XXVI Public Transportation* which authorizes the county MPO "...development of transportation systems...that will maximize the mobility of people...and minimize...transportation related fuel consumption and air pollution..." (*s.339.175*) does not specifically mention parking as a factor in transportation development, it also does reference using existing facilities more efficiently, congestion relief, land use and development, and the ..."overall social, economic, energy, and environmental effects of transportation decisions" (*s.339.175[5][b]*). Additionally, the statutes require that each MPO "...must develop and implement a traffic congestion management system" (*s.339.177[2]*).

The *Congestion Management Plan* as suggested in *Dade County Transportation Demand Management & Congestion Mitigation Study* (Barton-Aschman, 1992) indicates that such a plan requires an overall Congestion Management Coordinator (*Plan*, p.3-4) and countywide parking policies (*Plan Part 4*, pp.59, 67-68; Tables 3 & 4). Countywide authority over parking requires

countywide regulatory powers. It may be argued that this regulatory power is implied by *Chapter 163 Intergovernmental Programs*, and specifically *ss.163.3161, 163.3171, and 163.3202*, which address local land development regulations.

This regulatory power could devolve to a parking administration agency, located either within the MPO, in the Metro-Dade Transit Agency, as a part of the above-mentioned Congestion Management Coordinator, or as a separate institution if necessary. However, it is more important to develop a proactive and cooperative countywide parking policy than it is to develop another countywide institution. Despite the potential of jurisdictional disputes, a cooperative approach between the County and its municipalities could result in a compromise which has beneficial outcomes for all parties. This approach would involve the recognition of the overall County responsibility for establishing instrumental (regulatory) control over all public or private off street parking in the county - including within the boundaries of chartered municipalities (*s.316.3171*). The responsibility for ordinances regulating parking meter locations, "no parking" zones and on-street parking within the existing municipal jurisdictions would remain with the various municipalities, if they so chose. Additionally, the various municipalities would retain their aesthetic ordinances over parking of certain types or conditions of vehicles on private property.

The "fill-in" growth of the county in the areas between the (relatively) small municipalities can create problems for these municipalities if a consistent, countywide parking policy does not evolve. By tying the regulation of parking in with congestion management coordination and the existing countywide transportation authority, an overall policy of parking/transit integration would serve to best benefit Dade County's citizens and meet the explicit county responsibilities inherent in the State statutes. It is imperative that parking management be coordinated with transit management to implement changes in parking policy that will best work with transit rather than against it.

Instrumentally, whatever policy is adopted--status quo, incremental change, or departures from the norm--a centralized parking policy should be developed. The *Congestion Management Plan* has identified the need for the implementation of a series of congestion management techniques (*Plan*, pp.1-20). In particular are four non-statutory measures to create a more cooperative atmosphere between the County MPO, municipal parking managers, commuters and employers (*Plan* pp.10-12). This task, and the *Mitigation Study*-recommended changes (*Plan* pp.13-15) to the development regulations incorporated in the 1993 Metro-Dade MPO *Dade County*

Comprehensive Development Master Plan, require a single countywide office of parking management to coordinate efforts directly aimed at alleviating real or perceived parking problems; at recognizing parking's role in transportation demand management and congestion mitigation; and increasing transit ridership.

The *Mitigation Study* identified a series of congestion mitigation instruments; however, the only instrument that would appear to require State enabling legislation would be a so-called "parking tax." Parking is considered a taxable privilege under *Chapter 212, Part I*, (the "*Florida Revenue Act of 1949*") (*ss.212.01-212.07*), but only to the extent that parking user costs are subject to the State's six percent sales and use tax. A specific parking tax would have to be addressed by equally specific legislation. The State of Florida would not be the first jurisdiction to legislate such a tax (see Tri-County Metropolitan Transportation District of Oregon *Parking Tax Survey*, 1992 in *Appendix A*). If the County desired to proceed with a parking tax, there should be a concerted effort by a countywide authority (supported by a unified front of county and municipal officials) to create the state statutory provisions for such a tax. This revenue enhancement program would also require the firm support of the other urban counties (Broward, Duval, Hillsborough, Orange, Pinellas, Seminole) in the Legislature. However, to be most effective and equitable the net revenue derived from such a tax should be mandated to local area transportation programs rather than to general revenue funds. The overall choice and mix of policy instruments should be determined by a countywide parking authority.

The third level is one of **logistics**. The State of Florida regulates only the number of parking spaces to be provided by governmental (*s.316.1955*) and nongovernmental (*s.316.1956*) agencies for certain disabled persons on the basis of the Americans with Disabilities Act (ADA) requirements. The power to regulate the total number (minimums or maximums) of parking spaces which developers must provide for new developments has traditionally rested with local zoning authorities. By establishing the responsibility for parking policy development, administration, implementation, and enforcement upon a countywide authority (*s.163.3171[2]*), and by that authority maintaining a consistent approach to parking as a manageable asset, certain conditions of parking supply can be set. This approach may be based on the type and size of the development; its distance from existing and future public mass transit facilities; its potential impact on existing and future transportation corridors; and countywide compliance with the Clean Air Act and ISTEA requirements. Flexibility, adaptability, and cooperation are the keys to controlling parking space quantities across a wide and varied jurisdiction such as Dade County.

The various planning and regulatory powers identified in the listings of state statutes (abstracted for this study as *Appendix B-1*) indicate the state's recognition of the importance of parking policies in development and redevelopment, congestion relief, tourism, commerce, and industry. This requires a creative, positive, progressive, proactive, and cooperative approach to parking policy. The *Dade County Transportation Demand Management & Congestion Mitigation Study* comprehensively addresses the necessary components--institutional and instrumental--needed to attempt such an approach in Metropolitan Dade County.

Dade County Parking-Related Zoning Regulations

The Dade County zoning regulations that address parking provision are under *Article VII. Off-Street Parking*, which covers physical aspects like parking stall dimensions, layout, and striping (*Section 33.122*) and surface construction (*Section 33-126*).

Stall size is indicated; however, there is no provision for **compact car** parking as the ordinance uses the "one-size-fits-all" dimensions of 8.5ft x 18ft (Smith and Hekimian, 1985). Exceptions from this section's requirements are provided for previously allowed dimensions "grandfathered" into existing (pre-03-19-91) developments that undertake limited new expansions (*Section 33-122.1*).

Mixed-use development parking supply provision is not directly addressed by a specific ordinance. However, a number of the supply standards established under *Section 33-124* carry a statement: "Office, retail, restaurant and other areas in conjunction therewith shall have parking provided as otherwise contained in this article" (*Section 33-124.[k][5]* and others, for example). This would indicate that the County considers mixed-use parking requirements to be additive.

Flexibility is also not directly addressed by any ordinance, rather, the only method of adjusting the minimums standardized by *Section 33-124* is through the public hearing process and a variance. However, some flexibility in the location of the mandated minimum supply is provided for under *Section 33-128(a)* for business or commercial use, and *Section 33-128(b)* for apartment buildings.

Categorically, *Article VII. Section 33-124* establishes the third most comprehensive minimum standards of all of the jurisdictions included in this study. It contains some 43 ordinance categories and sub categories, from *Section 33-124(a)(1)* "single-family dwellings," to *Section 33-124(p)(2)* "self-service storage facilities."

The Dade County parking-related zoning ordinances are abstracted for this study as *Appendix B-2*.

Municipal Parking-Related Zoning Ordinances

The 27 municipalities in metropolitan Dade County are representative of any such area. Each reflects the values of its respective population through its ordinances and regulations. These values are often visible in municipal zoning ordinances that specify parking supply provision conditions for new development. Many of the municipal ordinances address set-backs, landscaping and screening, construction materials, and other aesthetic or mechanical facets of parking supply provision. These ordinances are not included in the scope of this study; rather, the ordinances which specified parking stall size, provisions for compact car parking spaces, mixed-use development parking supply totalization methodology, regulatory flexibility, and categorizations of land uses were the study's focus points. These five areas are shown in matrix format in *Appendix C-1: Parking Policy Comparison Matrix*, while the land-use categorizations are further broken down in *Matrix C-2* through *Matrix C-5*.

Stall size runs the gamut from the "universal" 8.5ft x 18ft (Smith and Hekimian, 1985), as used by Biscayne Park, Coral Gables, Florida City, Key Biscayne, Medley, and Miami Beach, to the 10ft x 25ft maximum of Miami Shores. The oddest dimension requirement used was the 160 square feet minimum that is mandated by the village of El Portal. Common ground could be found (for developments as opposed for private residential uses) by countywide adoption of the "universal" 8.5ft x 18ft that is already used in the jurisdictions mentioned above and the unincorporated areas of the County.

Only four reporting jurisdictions (Hialeah, North Bay Village, Opa-Locka, and Surfside) specify **compact car** provisions. It is difficult to accurately predict how many compact car spaces should be provided due to changing fleet mixes. The adoption of Smith and Hekimian's 8.5ft x 18ft stall size precludes the guesses necessary in requiring separate compact car parking supply.

In general, developers are required to use traditional, **additive** methods to arrive at the total parking supply requirements. That is, each land-use on a single site must be counted as a separate land use, such that the total required parking supply on that site is the sum total of all of the discrete supply mandates. Eight jurisdictions specifically require additive computation, while seven make no mention of a policy. Six jurisdictions (Village of El Portal, City of Miami, City of Miami Beach, North Bay Village, North Miami Beach, and South Miami) specifically address the potential in adopting alternative totalization methods for arriving at mixed-use site parking supply requirements.

Parking supply ordinances that implied some **flexibility** in parking provision mandates were noted in a number of jurisdictions. Biscayne Park, El Portal Village, Miami, Miami Beach, Miami Springs, North Bay Village, North Miami, North Miami Beach, Opa-Locka, South Miami, and Surfside join Dade County in offering some form of ordinance wording that suggests such policy flexibility.

The **category** area showed a wide range (no category to 83 separate categories) in the quantity of categories used by the various jurisdictions. The amount of detail and specificity within each category, and the number of sub-categories contained within the ordinances also showed wide variations.

Municipal parking-related zoning ordinances are abstracted for this study as *Appendix B-3*.

Previous Parking Policy Studies in Metropolitan Dade County

The *Interim Parking Plan 1981-1985 Central Miami, Florida* (Barton-Aschman Associates, 1981) was designed to address a critical parking shortage in the Miami CBD. Its recommended multi-faceted program was based on three steps: one, encouraging carpools and vanpools; two, restriping existing facilities to take advantage of the growing mix of small cars in the commuter fleet; and three, developing temporary intercept lots (*Summary*, p.iv-v). The report noted that while reasonably low cost, the program's success.

...will require a full-time administrative staff and adequate funds to maintain this staff and the necessary advertising and public relations costs needed to implement

the various measures. While it may be possible to administer the program through one of the existing public agencies in the area, for planning purposes in this report it is assumed that a new office would be created. The minimum staffing required to operate the program would be one professional and two support staff members, one of whom could be a technician. Because of the nature of the interim parking strategies, it will be essential to have an office that devotes full time to these efforts. (*Recommended Program*, pp.24-25).

The *Dade County Parking/Transit Ridership Study* (K.T. Analytics, 1987) was done to assess the impacts that changes in parking policies in downtown Miami could have on Metro-Dade Transit ridership levels. In this study, the authors call for the City of Miami Planning Department to set up the post of Transportation System Management (TSM) Coordinator to oversee the effective implementation of the authors' various recommendations regarding parking policy development, implementation, administration, and monitoring (*Executive Summary*, p.vi). Additionally, the authors address the possibility of the instigation of "Regional Parking Policies." They state that the City of Miami and the Metro-Dade Transit Agency.

...may wish to examine regional parking policies. For example, it may be worthwhile examining countywide parking revenue taxes, employee parking subsidy reductions and revised parking requirements. As the analysis by [the study authors] has suggested, a combination of these strategies downtown will boost transit ridership. The question is, what potential do the policies have if applied countywide? It may be a regional parking policy would be viewed as more equitable than one focussed primarily downtown. Of course, a regional revenue tax might not be effective in inducing transit ridership, since such parking outside downtown is free. However, there are some activity centers where a tax and subsidy reduction may make sense to consider, for example Civic Center and Dadeland South. A careful analysis would be required to determine the best parking policies at suburban locations. At the least, however, the County and City probably should pursue compatible policies in and outside of downtown. For instance, if the City pursues parking subsidy reduction downtown, the County and City should aim to reduce subsidies for their employees at all their facilities, downtown and elsewhere." (*Part III: Conclusions and Recommendations, Section 3: Epilogue*, p.86).

The Metro-Dade Metropolitan Planning Organization (MPO) Final Report, *Dade County Transportation Demand Management & Congestion Mitigation Study* (Barton-Aschman Associates, 1992) comprehensively addresses possible congestion management programs available to mitigate traffic congestion in the county. Adoption by the County MPO of the recommended *Congestion Management Plan* is listed as the first step (of 13) in the program, while the appointment of a County Congestion Management Coordinator is the second (*Plan*, p.3-4). This report addresses parking issues as an integral facet of the overall transportation picture and specifically applies parking management techniques to traffic congestion mitigation. The general thrust of the report is towards countywide coordination of all transportation-related policy development, as it states that the "...majority of the congestion management actions contained in the Plan require the active participation of municipal, county, regional, and state agencies. Thus the need for coordination among these agencies will be of critical importance" (*Plan* p.19). This particular study cites as the roles of the Congestion Management Coordinator: parking policy information disperser; parking price increase negotiator; parking supply decrease negotiator; and employer-subsidized employee parking decrease negotiator, along with his/her other duties (*Plan* p.10). The study recognizes the importance of parking policies in traffic congestion mitigation, in the development of transportation demand management programs and transportation management associations, and in intergovernmental and public/private sector relationships.

The Florida Department of Transportation (FDOT) commissioned a statewide study by the Center for Urban Transportation Research (CUTR) of the University of South Florida titled "Parking and Transit Policy Study" (CUTR rev. December 1993). The purpose of this study was to "...investigate the relationship between local parking policies and local transit policies and identify approaches for coordinating policies to increase transit use and increase the cost effectiveness of public investments in parking and transit" (*Executive Summary*, p.1). The study recommended that parking policies be developed which were similar to those in use in other metropolitan areas across the country including: differential pricing strategies for carpools and vanpools; support for federal reduction of the \$155 per month cap on employer-subsidized parking; zoning regulations that established parking maximums and flexible minimums for new developments; discouragement of local government development of CBD parking facilities that were primarily for revenue generation; development and promotion of park-and-ride facilities; and the implementation of TDM and Travel Reduction Ordinance (TRO) programs (*Summary*, pp.13-15).

The study determined that there was minimal coordination in the Miami area between transit and parking policies. As the study observed "...even in Miami, transit officials have little influence in parking issues other than those involving park-and-ride, Metrorail, and Metromover parking" (*Summary*, p.8). This may be due to well-publicized previous attempts in other areas to use strict parking supply regulatory powers to address a market-driven issue.

The CUTR study looked at four major parking policy considerations:

1. how to integrate parking policy into the planning policy;
2. how to coordinate parking policy with transit so as not to be detrimental to development;
3. how to integrate parking policy and land use planning; and
4. how to coordinate parking policy and transit policy so as to treat all segments of the populace equitably.

When the CUTR study attempted to answer the question, "Was there policy coordination?", it reached the conclusion that coordination was more difficult in Florida's urban areas than most other similar areas in the country. The CUTR study determined that market-driving parking policies possibly would tend to be more effective than regulatory policies that interfered in or with the parking user market.

Summary

Given the nature of the instruments needed to affect such a market-driving program, there would appear to be a need for a single source for parking policy-making and inter-agency coordination; policy administration, implementation, and enforcement; education, publicity and promotion, and public relations. No matter how or which parking policies develop in the course of the coming years, that single nexus is of paramount importance for virtually any opportunity of successful policy reformation.

At this time there is no cohesive, coordinated, countywide parking policy in Dade County. The historical development of the Dade metropolitan area was such that no specific pressing need arose that developed into a broad-based civic issue involving parking (except apparently the Miami CBD in the early 1980s). Therefore, no public policy was created to address such a perceived need. Parking ordinances were handled on a municipal basis and no specific countywide parking regulation program was seen as a necessity.

The spectacular growth of Dade County (urban sprawl as "Greater Miami" reached out beyond its city limits, urban infill in the unincorporated areas between the large and small incorporated cities in the county, and especially the development of a countywide transit system) has reached a point where there does appear to be a need for a countywide parking authority. While indirect, the State's legal authorization for the creation of such an authority may be implied from a liberal reading of the state statutes regarding County Government (*Florida Statutes: Chapter 125*) and Intergovernmental Programs (*F. S. Chapter 163*) in particular; and, in general, the other state statutes included in this study. The questions then become: *Should a countywide parking authority be created? Should this parking authority stand alone or be part of an existing public body? What type of programs should such an authority develop?*

All of these questions, while quite legitimate, are also political and were purposely not directly addressed by this study. However, there does appear to be a need for such an authority; it should operate as part of existing countywide institutions; and it should develop a flexible approach in the use of its powers. The alternative to the development of such an authority is fragmented approaches to parking policies, difficult progress in amelioration of traffic congestion, limited or slow development of alternative commuter mode shares, and an unproductive status quo. Accurately predicting the outcomes of policy changes deviating from the status quo is not

possible; on the other hand, neither is predicting the outcomes of maintaining the status quo. At best guess, maintaining the present policies may see one of three scenarios develop.

First Scenario: Nothing changes, that is, individual citizen perceptions as to the impact and importance of "parking problems" or "traffic congestion problems" will stay at the present levels. Some parking facilities will go underutilized while others will be overcrowded. The single occupant vehicle will remain the primary travel mode in Dade County. Transit share will fluctuate but remain low. Air quality non-attainment may become a problem. These are the least benign aspects of doing nothing.

Second Scenario: Perceptions of "parking problems" and "traffic congestion problems" become acute, with citizen complaints and local media exposure. More parking facilities are underutilized and capacity-stressed facilities become even more overcrowded. The single occupant vehicle remains the dominant travel mode in Dade County. Transit ridership remains low and subsidy issues develop. Intrasuburban infill will not necessarily be as controlled or transportation-integrated. Directed transit policy will be more difficult. Air quality issues become acute. Undercurrents of mistrust of official policies develops.

Third Scenario: "Parking problems", "traffic congestion problems", and "smog problems" reach a critical stage and public complaints escalate as civic organizations become involved and national media coverage focusses on difficulties caused by inaction. Costly underutilized parking facilities are abandoned and expensive new ones constructed to address supply/demand imbalances. The single occupant vehicle controls transportation policy decision-making. Transit ridership stagnates at uneconomic levels, forcing the privatization of the public mass transit system. Urban sprawl fills in the few remaining green areas of the county. The citizens lose confidence in elected and appointed public officials and administrators. The worst case scenario may sound like a *Sim City* computer game program gone fatally bad, and it is.

Other metropolitan areas of the nation--Seattle, Washington; Portland, Oregon; San Francisco and Los Angeles, California; Montgomery County, Maryland--have addressed the same overall transportation problems as affect Dade County. Interestingly, they each have also adopted the concept of areawide parking policies as part of areawide TDM or TRO programs. Additionally, these progressive jurisdictions continuously monitor, adjust, and update their policies. There is not yet available bodies of literature that review or analyze the use of areawide parking policies

as transportation management strategies. However, it would appear that these often-cited metropolitan areas are experimenting with areawide parking policy development and implementation because the local governments believe that such policies would seem to have the best chance for success in modifying parking user behavior based on five general policy aspects:

1. There is areawide parking authority (either within a stand-alone agency or integrated into other agencies) for the regulation of private off-street and public on- and off-street parking facilities as to supply, physical construction requirements, technical and aesthetic factors, location, and cost to user.
2. Parking authority functions as an operational part of existing areawide institutions, so as to integrate and facilitate parking policies with areawide economic development, planning, and transportation policies.
3. Parking authority functions in a cooperative manner with both the private sector: designers and developers, developers and lenders, developers and employers, employers and employees, central business district and suburban civic organizations, citizens and elected representatives, tourist and visitor bureaus, etc.; and the public sector: state, county, and municipal governments, metropolitan planning organizations, transit and transportation agencies, taxing and development districts, etc.
4. Parking authority develops into an areawide public education and promotion program directed at parking users.
5. Areawide parking policy integrates existing, or helps create or support new, alternatives to SOV use as the primary commuter mode choice.

Parking is a basic supply versus demand problem and the answer to the question asked in the introduction of this study, "*How much parking is enough to satisfy commuters, visitors, shoppers, developers, and public policy objectives?*", is unavailable, or at best it may be answered with the catch-all reply, "*It depends.*" On one hand, the public sector can step back and allow market forces to make decisions as to supply, price, and demand. On the other hand, parking policy is

so entrenched within overall transportation, congestion, development, and air quality issues (among others) that it is difficult for public agencies to abstain from attempts at market distortion strategies. However, if parking policies are uniform but flexible; if they are implemented areawide yet locally adaptable; if they are perceived as equitable, proactive, progressive, comprehensive, cohesive, and public; if the reasons for the policies are articulated, readily understood and widely publicized; if the effects of the policies are monitored and unintended consequences ameliorated; and if public administrators and elected officials support the policies and the public accepts them; then the potential exists for parking supply to roughly equate with parking user demand under all but the most exaggerated of circumstances. The difficulty lies in the matching of a fixed supply with a mobile and variable demand.

APPENDIX A

Literature Abstracts

Index of Abstracts

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Parking Management Strategies as a Traffic Congestion Mitigation Option.

Bellevue is located in the Seattle/Puget Sound area of Washington State. Addressing the concerns of the Metropolitan Seattle area regarding the environmental degradation caused by over-dependency on the single occupant vehicle became a priority for the cities in the region. The City of Bellevue chose to tackle the problem directly through a program to encourage its employees to use alternative commute and travel modes. In 1987 the City Manager was directed by the City Council to develop a transportation management program designed to reduce the demand for parking at major city worksites. In 1988 the Rideshare Parking Management Program (RPM) was initiated and rideshare participation rose from 15 percent to 25 percent of commute share. In 1989 a "pay-for-parking" component was added to the program "...to further discourage single occupant commuting and, as a result, participation doubled." Currently, "...nearly 400 employees at our three main worksites (49 percent) rideshare regularly."

The stated goals of the RPM program were:

1. Reduce peak hour parking demand at major City parking lots.
2. Preserve parking spaces for citizens, visitors, and private businesses in the vicinities of the City lots.
3. Provide a working model of an effective transportation management program.
4. Comply with the State of Washington Commute Trip Reduction Law, which applied to all worksites with more than 100 employees. The intent of the state law was to:
 - a. Improve ambient air quality
 - b. Reduce traffic congestion
 - c. Decrease fossil fuel consumption

Everyone working at the three major City worksites (full- and part-time employees, temporaries, consultants, interns, and volunteers) are required to register in the RPM program through the Employee Transportation Coordinator (ETC). If an employee indicated that they would rideshare at least 60 percent of the time, they were awarded with a number of coupons for free parking. The pay-for-parking fees were imposed as a monthly payroll deduction. Parking rules were enforced by a private agency and violations were dealt with through progressively severe disciplinary measures (vehicle towing for the fifth offense in one year). Additional components of the program include cash incentives for those who rideshare more than 80 percent of the time; a \$15 per month carpooling incentive; a "Fleetrade" program where employees may use City vehicles to carpool; subsidized vanpools; a tax-free transit subsidy of up to \$39.50 per month; incentives for walking, bicycling, or simply being dropped off at the worksite; and a guaranteed ride home program. New for 1994, is a free transit "Flexpass" which includes free bus travel (including weekends), the Waterfront Streetcar, and special buses to Kingdome sporting events, along with all of the other RPM program benefits.

According to the City of Bellevue, in November 1987 of 360 total employees, 85 percent commuted by SOV and 15 percent were rideshare participants. After the initial stage of the TM program, the January 1989 shares were 65 percent SOV and 35 percent rideshare. Pay-for-parking was introduced in April 1989 and by February 1993 the figures for 787 employees were 56 percent SOV and the balance using some form of alternative. A September 1993 study showed that there were 660 employees at the City Hall/Leavitt Building site and 386 stalls - a 1.7 employee per parking stall ratio.

The quarterly report (2nd Quarter 1994) provided by the City of Bellevue for this study showed average commuter mode uses of:

SOV	452.5
Bus	37.5
Fleetrade	58
Carpool	218
Vanpool	21
Walk/Drop-off	46.5
Motorcycle/Bicycle	9
Total employees	842.5

The cost of the program were also broken out in the quarterly report:

Payroll Deduction Revenue	\$ 19,932.50
Personal Payments	1,971.00
Police Guild Payments	2,163.75
<u>Incentives paid out</u>	<u>(6,420.00)</u>
 Total Gross Revenue	 \$ 17,647.25

Bhatt, Kiran. "Local Zoning Codes and Parking Supply" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Parking's Use as a Governmental Control for Land-Use and Zoning.

Bhatt systematically analyzed parking policy potential in zoning regulations. He reiterates the generalities available from the recent literature: parking supply restrictions can influence commuter mode choices; tighter parking supplies can also increase parking revenues; and parking supply is typically in overabundance in many areas. He also indicates that parking supply is not a dominant factor in development location determinations or lender preferences. He argues that while concerns may exist, "...there is some evidence to suggest that these concerns might be overstated in many situations. Although parking supply is recognized as a contributing factor, it does not appear to be a major determinant of economic development, particularly where the business climate is favorable."

The author listed a number of promising parking supply policy measures:

1. Set tighter minimum and maximum requirements to discourage parking oversupply.
2. Reduce or eliminate parking minimum requirements.
3. Set caps on parking supply in an area.
4. Require setting aside of certain parking spaces for HOV use.
5. Require setting aside of certain parking spaces for short-term parkers.
6. Develop incentives for developer parking supply reductions.
7. Allow developer payments to public parking authorities to provide off-site parking spaces so that parking rates are more easily controlled by public agencies.

Bhatt indicates five localized conditional variables that may affect the effectiveness of public parking policy strategies:

1. Developer/lender preferences are to supply less parking than local parking code minimums, or the minimums result in visibly underutilized parking at existing developments.
2. Mixed-use sites, especially those with differing peak utilization periods.
3. Locations where employer-paid parking is minimal, or where employer cashout programs have been implemented.
4. Sites where nearby private commercial or public parking supply is well utilized and parking regulations are enforced.
5. The costs of parking are relatively high compared to alternatives; transit capacity is not saturated; and uncontrolled parking supplies are at a minimum.

The author indicates that suburban communities are some of the best opportunities for parking policy reform measures like reduced minimums because parking is generally oversupplied, they are often sites of new mixed-use developments, and natural market forces may take a long time to mature - if ever. On the other hand, he suggests that urban areas may benefit from other strategies such as employer cashout, increased parking costs through parking taxes or differential pricing, developer in-lieu of payments, or reduced parking requirements in proximity of transit stations. He argues that in urban areas, "...market forces more closely affect supply and price of parking."

He identifies nine key issue areas:

1. Parking policy reforms may have financial implications for the private sector, especially if it "...is required to carry out significant traffic mitigation in return for lower supply requirements." However, developers may offset these costs by savings on parking spaces not supplied, while employers may save on parking

spaces not leased and use some of these savings to offer HOV incentives for employees.

2. It is desirable to have flexibilities in minimums and maximums set by codes to accommodate the specific needs of certain sites.
3. The code revisions must have flexibility in determining site-specific needs based on parking demand, HOV goals, transit proximity, and other factors.
4. Code revisions need to consider developer incentives to encourage them to accept the lower minimums or other requirements.
5. Collateral code revisions may be necessary to alleviate unintended consequences. For example "resident only" parking ordinances for residential areas near supply-reduced development sites.
6. Overall parking caps (freezes) are cumbersome and legislation-delayed. They are too slow to react to acute parking supply or traffic congestion problems. However, within a large area, "...it might be desirable to implement different caps to account for different levels of congestion and modal usage." Again, Bhatt indicates that if legislation is required for cap implementation that the time and effort expended may exceed any benefits received.
7. Often the major opposition to parking policy reform come from lenders and this opposition is "...based on long standing conventions rather than on hard evidence."
8. "Any policy aimed at reducing parking supply will have a greater chance of acceptance if it covers a large region rather than one or a few jurisdictions."
9. Localities may require some statutory authority to mandate certain types of traffic mitigation programs, especially if they are tied in with zoning code requirements.

Bhatt recommended four policy directions:

1. Local governments need not always intervene in the parking user market in order to accomplish goals of greater commuter usage of transit, ridesharing, or other alternatives to SOV travel mode. In some cases allowing the market to operate is sufficient if developers and lenders voluntarily provide reduced parking supply. Conversely, suburban areas, with their already existing market oversupply and low (or no) user cost, require governmental intervention through parking policy requirements. The evidence suggests that tight parking supplies and higher prices are associated with increased use of SOV alternatives.
2. The main role of parking supply requirement reductions is to prevent oversupply in support of other (and more direct) traffic congestion mitigation efforts. Flexible requirements "...then become an incentive and support mechanism rather than the main vehicle for encouraging traffic mitigation."
3. Parking policy reforms require that the policies adopted must remain flexible as they "...may well miss the mark in some areas, if not immediately then in the future with changes in development, transit, and driving trends. There always will be some developers who will provide much less than the maximum or much more than the minimum. Planners must be prepared to constantly monitor the parking demand and supply market, and adjust requirements over time by zones within urban and suburban areas."
4. Given the past experiences that cities have had in attempting to modify parking user behavior with zoning code provisions, parking policy reform should be implemented on a step by step basis, instituting zoning code revisions gradually in carefully monitored sub-areas and constantly evaluating the results. One initial approach would be to set low maximums and eliminate minimum requirements in areas within transit corridors and especially near transit stations. This still requires careful market analysis and periodic review of impacts.

Casazza, John A. "Parking for Industrial and Office Parks" (National Association of Industrial and Office Parks/Educational Foundation, 1986)

Parking's Role and Function in Economic Development Attractiveness.

Although primarily addressing parking lot design, construction and aesthetics, this work makes a significant contribution to this study through its *Appendix A: Survey of NAIOP Members on Parking Needs* which consists of a nationwide survey with results from 27 states and Canada, involving 83 total responses from developers, engineers, marketing and lending agents, property managers, designers and architects. Significant questions related to this study and the responses received are as follows:

- Q. "What are the most common problems you have encountered in relation to parking facilities?"
- R. 46 total replies under the heading "How to plan for space and flexibility use, "of which six said," excess parking and zoning requirements imposed by jurisdiction (including handicapped spaces)".

- Q. "Give an example of the most unusual parking problem. Could you have foreseen it?"
- R. 16 total replies under the heading "Poor planning", of which one was "zoning demands far in excess of needs caused poor design".

- Q. "Cite the most common design pitfall you have encountered."
- R. 22 total replies under the heading "Architectural design and parking layout pitfalls" of which two were "local zoning codes become a problem".

- Q. "What special problems have you encountered with parking in a mixed-use development?"
- R. Nine total replies under the heading "Planning for mixed-use parking" of which one was "zoning requirements not realistic".

Other areas of the survey dealt with design factors:

- Q. "What methods have you used for gaining the most efficient use of parking areas in your development?"
- R. Three categories of replies were identified: creating more spaces, using strong traffic controls, and creative planning. One of the methods to create more spaces per parking surface area was to design more stall spaces to accommodate compact cars - an area occasionally detailed in zoning regulations. According to the analysis of the responses, "...it was more efficient to park compact cars in one area, always using the maximum number of stalls allowed by zoning for compacts."
- Q. "Please list two or three methods you have used for enhancing the aesthetics of your parking areas."
- R. Forty percent of the replies suggested breaking up the "sea of asphalt" in some manner. One of the suggested methods was "...if zoning allows, breaking up large parking areas with green areas reserved for future parking."

When questions were posed regarding parking ratios, there was a wide range of ratio information to be construed from the responses.

- Q. "What type of user, if any, needs more than seven parking spaces per 1,000 square feet of space?"
- R. Of 125 responses, only 23 said they had no experience with requirements of more than seven, however the balance was split pretty evenly into three general use categories that required more than seven spaces (ranked by number of responses):

Service Industries - medical/dental offices, health clinics, training and conference centers, schools, credit bureaus, and IRS offices.

Public use facilities - restaurants, entertainment facilities (sports venues, theaters, movies, dance halls), hotels, and fitness centers.

Office/industry - Phone sales ("back offices"), high-tech industries (light manufacturing and assembly-type), mini-offices, and mixed-use with overlapping shifts.

Q. "How many parking spaces do you provide per 1,000 net rentable square feet of suburban speculative office developments?"

R.

Spaces per 1,000 square feet								Responses
2	.	.	.	.	.	.	.	2
3.0-3.5	.	.	.	.	.	.	.	18
3.5-4.0	.	.	.	.	.	.	.	41
4.5-5.0	.	.	.	.	.	.	.	14
9	.	.	.	.	.	.	.	2

According to the article, the survey also contained a series of questions regarding developers experiences with local zoning requirements, the authors hoped that "...the shared information can effect a realistic overall view that will be beneficial to local zoning authorities and municipalities as well as developers."

Q. "Does your jurisdiction allow for compact parking stalls starting with the first stall?"

R. The responses were split 31-yes and 35-no. One responder also noted that "...most zoning departments float between 9 and 10 feet [width of stalls] for standard cars but the local zoning codes have not recognized that 90 percent of today's cars are 12 to 14 feet long and 55 to 60 inches wide!"

Q. "Can you provide parking to meet jurisdictional requirements inclusive of the truck loading stalls?"

R. Out of some 70 responses, only eight developers felt that they had not been able to meet the requirements.

Q. "Do you have to provide for handicapped spaces?"

R. Of the 81 respondents, 76 said that they were required to do so. The survey was conducted in 1986, before the passage of the Americans with Disabilities Act (ADA).

- Q. "What are the local parking requirements in your area for industrial buildings and office buildings?"
- R. The responses indicated that 39 percent of the developers agreed with their local zoning requirements, 42 percent felt that zoning requirements were minimal and that more spaces were desired, and the remainder felt that zoning requirements were too high and that they wanted to decrease the ratio. Over 50 percent indicated that the "rule of thumb" of 4/1,000 square feet ratio was what they felt most comfortable with, while only 35 percent said that was the local zoning requirements for office buildings. For industrial buildings, over half of the responses indicated a zoning requirement of 2 per 1,000 square feet, which only 28 percent felt that was adequate. For warehouse facilities, a majority of developers stated that 1 per 1,000 square feet was the local zoning requirement and a similar majority indicated that ratio as being in agreement with their needs.

These types of questions are appropriate for any local parking policy study - formal or informal - that would also indicate to an area's developers, lenders and employers that the local agency responsible for implementing and enforcing parking policies has an interest in their responses. A study of this type could also become the catalyst for a dialogue among the actors involved. Communication and education are the basic elements for building a consensus towards cooperation.

Ferguson, Erik. "Transportation Demand Management: Planning, Development, and Implementation" *Journal of the American Planning Association* Vol. 56, no. 4 (Autumn 1990) pp.442-456

Parking Management Strategies as an Option to Alleviate Traffic Congestion.

Ferguson's study indicates that transportation demand management (TDM) can help ease some transportation problems but cannot alleviate all transportation problems. He suggests that TDM requires cooperation between all of the actors involved: landowners, developers, lenders, employers and employees, business associations, and governmental administrators on the local, county, regional, state, and federal levels. He argues that flexible approaches appear to work best for all involved. Additionally, he feels that TDM strategies that have proven most effective involve on-site employee transportation coordinators, alternative work scheduling, and parking management. This study indicates that of the five aspects of travel that TDM attempts to affect (trip generation, trip distribution, mode choice, spatial and temporal route selection) parking pricing can have an impact only on mode choice. This is due primarily through economic incentives for commuters to carpool, use vanpools, telecommute, or shift to transit.

In his analysis on transportation management associations (TMA), Ferguson points out that some 14 percent (on average) were formed over parking management issues - among others; 43 percent were incorporated; 63 percent had full time staffs; 63 percent were voluntary; 29 percent used parking management services as a program element; and 12 percent included high occupancy vehicle (HOV) preferential parking as another element.

Ferguson studied trip reduction ordinances (TRO) using five municipalities and four county/regional examples. Of these, Bellevue, Washington and Pasadena, California included preferential carpool parking, while North Brunswick, New Jersey's TRO included vanpool parking and park-and-ride lots depending on development size. Sacramento County, California required employers to provide preferential carpool parking spaces and developers to set aside at least 15 percent preferential carpool parking spaces.

Ferguson recognized a third organizational/implementation effort in TDM development along with TMAs (private efforts) and TROs (public efforts) - the negotiated agreement. In analyzing 23 negotiated developer agreements for trip reduction programs in Montgomery County,

Maryland, the author identified parking policy elements in three sectors: residential developments (4 negotiated agreements total) including park-and-ride lots (1); office developments (14 agreements) including reserved carpool/vanpool parking spaces (6), employee parking fees (2), reduced employee parking supply (2), park-and-ride lots (2), reduced parking fees for carpools/vanpools (1), prohibition of employer-subsidized parking (1); and mixed use developments (5 agreements) including reserved carpool/vanpool parking spaces and prohibition of employer-subsidized parking (1 each).

In his analysis of the effects of parking management policy impacts, Ferguson reiterates the findings of the predominant literature in this field:

1. Parking management, especially parking pricing, has the largest and most consistent impact among TDM elements;
2. Implementing comprehensive parking management policies is more difficult than simply raising parking prices;
3. Because over 90 percent of American workers pay nothing for parking most firms have better knowledge of how many parking spaces they supply than how much this "free" parking is costing them (the employers);
4. Parking supply is too high at current market prices, "...perhaps because of local parking requirements in zoning ordinances";
5. Federal, state, and local tax policies assist in perpetuating free parking for employees who commute in single occupant vehicles; and
6. If parking management is not immediately feasible other types of incentives must be put in place despite their tendencies towards weaker or less consistent results.

Ferguson takes an advocacy position regarding the early inception of TDM programs in the development cycle. He states that retrofitting existing developments with preferential carpool/vanpool parking spaces or attempting reductions in existing space quantities is an inefficient TDM strategy compared to developer involvement in a TDM program at the onset of project planning. He summarizes his study as follows: "Does TDM work? The answer is an unqualified yes. Is TDM the complete solution to the latest version of the urban and suburban transportation problem? The answer is an equally unqualified no. The only other clear message concerning TDM implementation that can be derived from this research is that it is a very 'messy' business, requiring cooperation and support from many different groups within the community in order to achieve any measurable success."

Flynn, Carolyn P. & Lawrence Jesse Glazer. "Ten Cities' Strategies for Transportation Demand Management" *Transportation Research Record* 1212 (Washington, DC: Transportation Research Board, 1989)

Parking's Role in Alleviating Traffic Congestion and Reducing SOV Travel.

This paper presents ten case studies in the implementation of transportation demand management (TDM) programs, some of which addressed parking policies as a strategic tool in the instigation of TDMs.

Case Study 1 - Seattle, WA.: "Adverse traffic or parking impacts associated either with a single development or cumulatively with prior, simultaneous, or planned future developments are identified by city staff in the course of environmental review of a new developmental proposal. Depending on this review the city may also require one or more...ridesharing incentives: higher parking fees for single occupant vehicles, parking management techniques,...reduced parking costs for HOVs." As to the experience with this program, city planners report that "...developers complained at first, but with consistent application of the requirements over several years they have now become used to the process. Since 1986 or so, the program has become standardized, with developers knowing what to expect. METRO [the areawide transportation agency] believes that the developer requirements program is working well. There is 44 percent transit ridership in downtown Seattle and a lot of developer activity in preparing and implementing TMPs [transportation management programs]."

Case Study 2 - Portland, OR: Portland's regionwide transportation agency, Tri-Met, operates Rideshare, serving three counties in the Portland area. According to the study, "Tri-Met's discounted carpool parking program provides incentives to rideshare. The agency administers approximately 800 parking spaces in parking garages, surface lots, and long-term meters. All spaces require at least three members per carpool. Their innovative long-term-meter discount-carpool-parking program allows 580 carpools to park for \$25/month and exempts the carpools from paying the normal meter rate." Regarding the experience of Portland with this program, the study indicates that it has been "...particularly successful in providing incentives such as discounted carpool parking and park-and-ride lots. Although they have been successful in promoting carpools and facilitating transit use, efforts to promote vanpools have not produced results. The Rideshare program received an excellent response from employers for assistance. At

present, most of the employers who have sustained employer-based TDM programs have been local hospitals. Located in residential areas with constrained parking limits, these employers have been most active and successful with a comprehensive TDM effort."

Case Study 4 - Sacramento, CA: Sacramento's multifaceted TDM policy includes developer requirements, a rideshare ordinance and an incentive ordinance, all directed toward a goal of 35 percent of peak-time commuting employees arriving at their worksites by some means other than SOVs. According to the study, the 1983 incentive ordinance "...allows substitution of required off-street parking spaces for the provision of incentives to use alternative transportation rather than single occupancy vehicles. The substitute measures are assigned a particular 'parking reduction level'; for example, offering employees a 50 percent transit bus pass subsidy allows for a 5 percent reduction or 20 spaces, whichever is less." At the time of this study, "...city staff report that the parking incentive ordinance has been used only once, and they plan to revise the ordinance. The primary problem is that the ordinance is complicated, and developers are reluctant to build below traditional levels of parking."

Case Study 5 - Bellevue, WA: Bellevue's unique TDM strategies have been developed to address the single most important issue in the area - growth-induced citywide traffic congestion. The Bellevue TMA provides TDM services within the Central Business District Sub-Area, a 90 acre "new downtown", whether employers are members of the TMA or Bellevue Downtown Association or not. The TMA provides parking and transportation management services, a transportation coordinator, and promotes ridesharing. According to the study, "[i]n order to provide parking management services, the TMA enters into service contracts with property owners whereby the TMA is given, without cost, employee parking spaces that are currently provided free. The TMA then charges for the parking and uses the revenues to provide parking enforcement and other transportation services." Also according to the study, Bellevue planners "...report that there is a reasonable level of employer and developer support for the downtown TMA, particularly because it is administered by the downtown business association."

Case Study 6 - Orlando, FL: Orlando's problems reflect the basic difficulty in creating parking policies in Florida's cities. As the study notes: "Orlando passed a 1982 ordinance that lowered off-street parking requirements for office...development in exchange for contributions to a transportation management trust fund. When no developers took advantage of the ordinance, the city passed an impact fee ordinance, which required new developments to pay for road and

related infrastructure capacity needs. These fees are targeted primarily toward continuing to build roads and widen freeways, and there is little focus on TDM." With the Orlando area experiencing difficulties managing its rapid growth, the city - which, like the state, does not collect income taxes - tried to find ways to fund the infrastructure improvements necessary to support development. According to the study, under the "...1982 Downtown Parking District Overlay Ordinance, a developer could avoid the construction of up to 20 percent of [zoning]-required parking in exchange for contributions to [the] trust fund. Contributions would be based on 80 percent of construction cost for each space avoided, with the 'cost' of a space set periodically by the city council." The 1986 Impact Fee Ordinance required developers to pay for infrastructure improvements needed to accommodate traffic generated (based on ITE trip generation projections) with fees derived from actual cost-of-improvement estimates. According to the study these types of programs are ineffective in either controlling traffic, managing parking or generating revenues. Between 1982 and 1986, "the city received no payments for the trust fund because project lenders were leery of proposals to design less than 'adequate' parking into office and mixed buildings. In suburban markets, planners point out that developers and lenders believe that below-standard parking facilities detract from a project's appeal to office employers. Additionally, although parking facilities are an expensive investment both in terms of construction costs and the valuable land consumed, they are also considered to be a permanent fixture to the property that represents an asset with a quantifiable value under traditional appraisal methods."

Case Study 10 - Los Angeles, CA: If any area of the country is representative of the problems associated with the growth of suburban employment centers, it is Los Angeles. Recognizing the need to develop strategies that allowed for economic growth while attempting to mitigate the concurrent traffic congestion and parking difficulties, the city applied a three-stage approach. It passed, in 1983, an incentive ordinance where developers were offered reduced parking requirements in exchange for successfully promoting commuter alternatives to the SOV. In 1985, it passed a plan whereby developers had to pay fees for transportation mitigation improvements and, in 1987, an employer ridesharing ordinance affecting large employers and large multiuse buildings. According to the study, parking requirements (both on and off-site) would be reduced if a parking management plan was submitted along with the application for a conditional use permit. However, to insure "...against the possibility that projected reductions in parking demand at the site are...achieved, the land owner must either set aside a land bank or enough open space to accommodate the full amount of parking required by code, or...must gain approval from the zoning administrator of an alternative plan. The owner must also record a covenant running with

the land that if specified levels of compliance are not achieved, the owner at that time will develop the additional parking spaces or other measures required by the zoning administrator." Up to the time of the study only one developer had used the ordinance in conjunction with an aggressive TDM program, and that for a site near a new subway. According to the study the primary reasons for this lack of use were "... (a) the low level of minimum parking currently required by city code; (b) the lack of specified evaluation criteria for permit approval; (c) the fear of local lenders that overreducing parking will lessen marketability; and (d) restrictive provisions of the ordinance protecting the city, specifically the requirements for land set-asides and a covenant running with the land to bind future property owners." Other reasons indicated seemed to revolve around implementation, "(a) most developers do not know that the ordinance exists because of a lack of any city budget, staff, or [publicity]; (b) unwillingness of developers to tolerate the delay of 3 to 9 months typically required for approval; and (c) confusion from the diffusion of responsibility for the ordinance among three city departments concerned with transportation, planning, and zoning."

The summary of these studies indicates that in most of the cases "...[parking] incentive ordinances did not work because developers did not take advantage of them. Developers reportedly perceive building below traditional parking levels as a threat to the marketability of the development. In cities where parking code requirements are perceived to be above market requirements, such ordinances can be effective." However, the study also indicates that where the incentive of preferential parking for rideshare and carpool participants was used (in 8 of the 10 cities), that this had worked well to reduce the use of SOVs.

Huerby, Al. "Proposal to Levy Parking Charges in the San Francisco Bay Area" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Parking's Purpose in Local Government Revenue Generation.

In this presentation paper Huerby, the senior financial analyst for the Bay Area Metropolitan Transportation Commission (MTC), reviewed the use of commuter parking charges as a facet of the Transportation Control Measures (TCM) mandated for the Bay Area by the California Clean Air Act. Two broad approaches were developed by the MTC staff:

1. Using parking charges as a demand control measure, with the revenues generated to be used to implement worksite (including public sector sites) commuter alternative mode programs.
2. Using parking charges as a governmental revenue generation mechanism with the proceeds dedicated to traditional regional transportation improvements, including bus/rail capital improvements, fare/transfer subsidies, and regional HOV programs.

The revenue generation program proposed a number of instrumental possibilities:

1. A \$2.00 to \$3.00 charge on employee SOV parking irrespective of where parked.
2. A similar charge but only on employer-provided parking.
3. A general assessment on all parking space supply - shopping centers, entertainment facilities, commercial lots and garages, etc.
4. An air quality improvement element, which included:
 - A. A bridge toll increase of \$1.00 on all seven area bridges.
 - B. A \$0.14 per gallon gas tax increase.
 - C. An annual \$10.00 per vehicle regional registration fee.

Huerby observed that public hearing comments on the Clean Air program were "...generally quite negative on the parking charge component, and, as a result, the Commission in its approval of the plan voted to keep the parking charges (commuter only) as a contingency to be used only if the Commission was unsuccessful in getting the other revenue raising measures approved by the legislature." According to Huerby, during the hearings it became evident that "...the Commission was clearly uncomfortable implementing parking charges except as a revenue raising mechanism. Given this position, it became more logical to propose more traditional and thus less controversial sources of revenue to fund a program of mobility improvements to achieve air quality improvement." Huerby indicated that he felt that if the Commission had chosen to view the imposition of parking charges as "...an appropriate means of altering commute behavior...by dedicating revenues generated to a program at the employment site designed to provide commute alternatives," that the outcome of the public hearings might well have been different. However, according to the paper, as an ongoing part of the TCM program the Air Quality Management District can "...reinstate the parking charges at their discretion, either as a demand motivator or as a revenue raising mechanism."

Institute of Transportation Engineers. Employment Center Parking Facilities (Washington, DC: ITE, 1988) ITE Publication No. IR-052

This work consists of five main sections: *Considerations for Employment Center Parking*, *The Role of Ridesharing*, *Traffic Generation*, *Parking Demand*, and *Parking Design*, there is also an appendix: *Employee Ridesharing Data Summary* (from 1981) which gives rough estimates of rideshare percentages at a number of employment centers nationwide. This booklet is to be used in conjunction with other ITE publications: Parking Facilities for Industrial Plants and Parking Generation. This informational report updates and includes some sections of both due to changes in vehicle sizes and increases in environmental awareness. Summaries are provided within this publication for each of the listed sections.

From the summary on *Ridesharing*, this study indicates that most local parking space requirement ordinances do not reflect the reality that nearly 20 percent of employees rideshare in some form and that economic and social issues, rather than policy mandates have resulted in parking space under-utilization. In addition, "...Active employer-sponsored ridesharing programs significantly reduce parking needs at employment centers", and "To further encourage developers and employers to implement active ridesharing programs, many local zoning and planning agencies have implemented or are considering implementing ordinances to allow reduced parking requirements or are granting variances in return for viable ridesharing programs. The results of these efforts by employers, developers, and local jurisdictions may be decreased parking costs for employers and developers and decreased peak period capacity requirements for both public and private transportation facilities."

Parking's Role in Land Use and Zoning.

According to the section on *Ridesharing*, a number of jurisdictions are now granting exemptions or variances on parking space zoning ordinances:

Anne Arundel County, MD
Bellevue, WA
Broome County, NY
East Brunswick, NJ
Los Angeles, CA

Austin, TX
Boulder, CO
Chester County PA
Hillsboro, OR
Naperville, IL

Oakland, CA
Port Arthur, TX
Schaumburg, IL
Skokie, IL

These variances tend to be based on five criteria:

1. Creation of a proactive ridesharing program by the developer or employer;
2. Reductions in parking requirements do not result in spillover or congestion;
3. New leases not result in usages that overwhelm the reduced parking;
4. Permits are conditional and monitored
5. There must be a "parking land bank" available in case the rideshare program fails to reduce actual parking demands.

The section on *Parking Demand* illustrates the ranges of parking requirements based on type of employment and floor area. The study indicated five factors affecting the demand for parking at employment centers:

1. Location - urban locations (high densities, high land costs, transit availability) can adopt lower parking space requirements;
2. Scale - larger facilities have higher percentages of rideshare commuters, while multiple-shift operations also can avail of lower parking space requirements;
3. Personnel policies - keep assigned parking to a minimum;
4. Fluctuations - cyclical business, weather-related, absenteeism;
5. Type of employment category - this applies to employee per 1,000 square feet ratios.

This study indicates that the "rule of thumb" method of calculating parking spaces at 4 per 1000 square feet of building gross floor area (GFA) is inadequate to address the vagaries involved in fitting the "rule" to different employment sources. The major conclusions that can be drawn from the *Parking Demand* section of Employment Center Parking Facilities is that there should be allowances made in parking policy requirements, which can be based on square footage, type of use and on employer ridesharing program implementation. The new rule of thumb indicated by this study is 1.3 persons per vehicle if there is no ridesharing program, with a multiplier factor based on carpool percentages if there is a monitored ridesharing program in place.

Parking's Role in Reducing Traffic Congestion.

The summary from the *Traffic Generation* section indicates that of the five peak traffic reduction recommendations that came out of the study only one, the use of remote parking with a shuttle service was directly related to parking.

ITE Technical Council Committee 5D-8 "Guidelines for Parking Facility Location and Design (A Summary Report)" *ITE Journal* Vol.60, no.4 (April 1990) pp.13-16

Parking's Role in Development Attractiveness.

This article is an update to be used with Parking Principles (Highway Research Board, 1971), in particular the chapter titled "Location and Design". Changes included new data, adjustments in consideration of small car separation techniques, and the addition of a section on handicapped access. According to Guidelines, small cars now make up some 40-50 percent of all cars in service and by adjusting stall sizes accordingly, more vehicles may be accommodated per 1,000 square feet of parking lot surface area. Their basic recommendation for stall size is now 7.5-8.0 feet wide by 15 feet in length, however, the ITE committee also recommends a safe allowance of large car-size stalls to accommodate their use in certain geographic or specific-use situations. Overall, the recommendation means that lot sizes may be smaller and still accommodate mandated quantities of parking spaces. Adoption of the ITE guidelines by zoning boards may tend to allow developers to save money on parking lot surface area while still maintaining "market"-acceptable numbers of parking spaces.

Kuner, Rick. "Downtown Parking Policy Analysis" *Transportation Quarterly* Vol. 37, no.4 (October 1983) pp.559-566

Parking Policy Analysis Methodology.

Kuner's article is a descriptive primer on policy analysis methodology directed at parking policy in particular. He indicates that parking policy-making is a difficult process due to the diverse and legitimate concerns of the various actors, the perception that parking policy issues can be controversial, that alternatives may be overlooked, and that systematic or cost-benefits analysis methods are cumbersome and inexact. Kuner simplifies parking policy issues by recognizing that parking is "...a system in and of itself...", described in terms of supply and demand and he suggests a matrix approach to parking policy analysis.

First he breaks down the demand into "Time Duration" (short- or long-term), "Trip Purpose" (work, school, shopping, etc.), and trip "Frequency" (on a trips-per-week basis); and then the supply by "Type of Space" (off-street lot or structure, on-street), and "Time Availability" (unrestricted or restricted by time of day, length of time, or day of week).

Second, he recommends accumulating an accurate data base on both supply and demand.

Third, he suggests an "Interest Group Matrix identifying goals and objectives on one axis and interested groups on the other axis...to ensure representation of all concerns. Cells of the matrix can be used to indicate whether a given objective is applicable to each group, provide a preliminary indication of priority, and help determine possibilities that may exist for consensus-building."

The author suggests three broad parking strategies:

1. Reduce parking demand via carpools, vanpools, transit construction and promotion, pricing incentives and penalties, and - for long-term effects - land use zoning regulations.
2. Increase parking supply by increasing turnover rates or building new facilities.

3. Improve parking management by seeking alternatives based on five key questions:

- A. What policies will cause the desired effects?
- B. What are the variables that can be controlled by policy-makers?
Spatial - type, number, size, and location of spaces
Temporal - permitted times, days, and durations
- C. What policies would each interest group like to see implemented?
- D. What are the policy constraints?
- E. What complementary parking and transportation policies can be combined?

Fourth, for impact analysis of alternative policies, Kuner suggests that using an "Achievement Matrix that lists goals and objectives on one axis, alternative policies on the other axis, and the impacts of each policy in terms of each objective in the cells of the matrix effectively summarizes the results of this step."

Fifth, the evaluation process (organizing, examining, and judging the impacts of alternative policies) enables the policy makers to learn about what various policies may - or may not - accomplish; focus their own viewpoints and values; look at more policy aspects than had been assumed existed; discover alternative policies or policy combinations that may be refined to accurately reflect desired objectives; understand the impacts of meeting previously stated goals and objectives; identify potential complexities and possible undesired consequences; and narrow differences or build consensus.

Kuner lists four reasons not to attempt a cost-benefit analysis of parking policies:

- 1. Quantifying costs may seem easy but quantifying benefits is difficult and time consuming.
- 2. Discount rate selection is arbitrary.

3. Qualitative impacts are excluded.
4. The methodology is linear, but parking users' values are often non-linear.

As a counterpoint, the author gives seven beneficial reasons to use his suggested matrices approach to parking policy analysis:

1. Extend mental capabilities;
2. Systematically organize the thinking process by using tools beyond simple list-making;
3. Stimulate creative thinking to fill in empty cells and recognize previously undetected relationships;
4. Allow incorporation of as many interest group viewpoints as possible;
5. Indicate areas where flexibility in policy implementation is required;
6. Summarize and simplify complex relationships;
7. Allow "sensitivity analysis" - the development of "what if?" scenarios.

McCutcheon, Melody & Jeffrey Hamm. "Land Use Regulations to Promote Ridesharing: An Evaluation of the Seattle Approach" *Transportation Quarterly* Vol.37, no.4 (October 1983) pp.479-491

Parking's Use as a Governmental Control for Land Use and Zoning.

McCutcheon and Hamm studied first-hand the effects of the environmental legislation-based parking regulations adopted by the city of Seattle, Washington in the late 1970s to discourage the use of single occupant vehicles (SOV) in the Seattle central business district (CBD). These parking regulations were based on a simplistic formula designed to encourage alternative mode shares by restricting the total parking requirements for a development and adding preferential parking spaces for high occupancy vehicles (HOV). Their review study indicated that this policy had not been successful for a number of basic reasons:

1. Employees who might have driven alone were not using building-based carpools but were arriving by transit, bicycle, or on foot, or were carpooling in vehicles parked at other facilities.
2. Employees were parking at less costly facilities nearby. New developments charged carpools \$80 per month while nearby public lots charged carpools \$10 per month.
3. Original estimates of long-term parking demand for a new development were inaccurate.
4. The mandated carpool plan for the new development was not being administered properly - intentionally or unintentionally.

The authors identified two weaknesses in the original Seattle policies.

First, private sector developers found the policies to be unacceptable, expressing resentment that the city would attempt to regulate or restrict long-term parking supply and therefore restrict the developers income or threaten the development's marketability. The perceived threat to their

economic well-being outweighed the long-term benefits of the City's traffic congestion mitigation and Clean Air Act compliance goals. They complied with the carpool requirement agreements until they were issued the development's certificate of occupancy, then abandoned the program.

Second, enforcement of carpool agreement compliance was not in the realm of public health or safety issues and was not specifically addressed.

McCutcheon and Hamm concluded that the original policy was weak, unattractive to the developers, and had very limited enforceability. Their evaluation cited five points:

1. There was a pressing need to develop regulations that would promote ridesharing and discourage SOV travel, however the vehicle was not through the use of environmental legislation as Seattle had first attempted. The very nature of the legislation compromised the acceptability of the ridesharing program implementation.
2. There were systemic imperfections in the methodologies to determine overall parking demand for CBD developments, which made the equations that were used to determine the rideshare ratios inconsistent and incorrect.
3. Demand for CBD development parking are not necessarily met by on-site supply and the parking supply/demand issue must be looked at as part of an overall CBD transportation/parking management program.
4. The economic incentive to carpool was not sufficient to discourage SOV travel.
5. The nature of the carpool incentive measures made them difficult, if not impossible to enforce.

The authors recommended that ridesharing programs be imposed through zoning code regulations rather than through the environmental review process as had first been implemented. Clear zoning code ordinances would apply to all developments, provide consistent forewarning of conditions to developers, and increase the chances of their acceptability. Additionally, they offered four supplemental recommendations:

First, use of the zoning code ordinances to set minimum ridesharing requirements, beyond which developers could substitute ridesharing programs or incentives in exchange for incremental reductions in overall required parking supply. The zoning code would set minimum parking requirements for each type of development, the minimum ridesharing requirement, and the available substitution rates. Since the cost of providing parking spaces is so great, developers would be supplied an economic incentive to promote ridesharing programs.

Second, improve the methodology for determining actual parking demand based on land use, site specificity, transit proximity, and other relevant factors in order to more accurately determine development parking minimums.

Third, where there is a charge for parking, use cost reduction incentives to encourage carpool parking usage - they recommend a minimum of 30 percent as a real incentive, combined with extensive publicity surrounding such programs.

Fourth, measures must be designed to ensure developer compliance without resort to litigation, including bonds or cash deposits that would be forfeited for non-compliance or failure to meet agreed upon set goals. Economic incentives create developer initiative.

The authors conclude that "...environmental concerns and the...policy of public fiscal austerity are strong motives for local jurisdictions to reexamine traditional parking requirements that in essence provide for unlimited parking space and encourage commuting alone; ...the current challenge is...to craft...land use regulations so that they more effectively achieve public policy and muster greater acceptance among developers and building owners."

McGarry, Robert S. "Proposed Parking Tax for Montgomery County, Maryland" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Parking's Purpose in Local Government Revenue Generation.

According to the author's paper presented at this symposium, in the winter of 1988 Montgomery County faced a fiscal crisis in transportation funding. Capital (roads) programs had been reduced by \$20 million and highway maintenance postponed by two years. McGarry proposed a parking tax for revenue generation to the county executive who rejected the concept for three reasons:

1. Voters were opposed to new taxes;
2. County highways could get by with less revenue;
3. The idea was politically inopportune.

However, a county council committee determined that, indeed, more revenue was needed; and a parking tax was a good source since the revenue generated would go to transportation. Due to previous legal determinations, the parking tax had to take the form of an excise tax as opposed to a property tax or transportation impact fee. The county council bill offered levied a \$60 per space per year on "...any person who made land available for parking by employees of any business", but exempted retail, along with housing, from the tax. The bill was based on five points:

1. It would be administered by a self-reporting form similar to existing federal/state income tax forms.
2. Additional exemptions were provided for: persons with fewer than 10 spaces; parking meters with less than two-hour limits; park-and-ride lots; vehicle storage areas; federal and state facilities.
3. To encourage TDM programs the tax was reduced by 50 percent for affected taxowers who provided alternative transportation options provided that they

charged for parking and provided transit discounts.

4. All county parking including spaces in the county's public parking districts were taxed.
5. Generated revenues were dedicated to a newly developed transportation trust fund.

Business opposition was "...LOUD and UNIVERSALLY OPPOSED" [capitals the author's] because of the expected costs to large employers; the fact that only businesses were taxed to support communitywide transportation needs; and the perceived loss of competitive edge to neighboring jurisdictions. Nevertheless, the bill passed the county council 4-3. The county executive vetoed the bill and it died, since five votes were needed to overturn his veto.

According to McGarry, by the symposium in 1990: the capital budget had seen a further reduction of some \$150 million; there was still a \$60 million operating shortfall; the previous county executive had been ousted; and the new county executive was proposing a parking excise tax.

Norcross, Rick. "*No Parking Downtown Talking Blues*" copyright: Rick Norcross, 1980. Reproduced with the permission of the songwriter (September 6, 1994).

This song was hurriedly written in November of 1980. The City of Burlington, Vermont, had attacked a chronic "parking/congestion problem" by turning the downtown central business district (CBD) into a grid of one-way streets. At the same time, the City eliminated much of the on-street parking that had been available in the CBD. The merchants were upset with the parking space reduction "...just in time for the Christmas rush...", according to Norcross. The song was played live on many occasions and recorded under the sponsorship of a group local downtown merchants (including Ben & Jerry's Ice Cream).

Burlington's parking problems remain. In fact, the song was recently broadcast by the local Public Radio station, WCFE in Plattsburg, New York.

No Parking Downtown Talking Blues

Rick Norcross

Gonna start up my Nash, gonna drive her downtown
It's a beautiful day and I think I'll look around
Heading down Main Street, just look at that lake
Turn right on Church Street, just looking for a break

(chorus)

No place to park my Nash
No way to spend my cash
No place to shut her down
There's no place to park downtown

I'll drive through the bank just to take out a loan
My old gas tank is just as dry as a bone
There's no telling how long I'll be driving around
Looking for an empty parking place downtown

(chorus)

No place to park my Nash
No way to spend my cash
No place, when it rains you're gonna drown
There's no place to park downtown

They've got a whole team of metermaids in force every day
So once you find a parking space there's two ways to pay
The only way to shop when you're going downtown
Take two people with you, keep one driving around

(chorus)

No place to park downtown
No place, I'll keep driving around
Turn right off Pearl, take South Winooski down
It's a wrong way, one-way town

The workers get paid each day they drive downtown
But every time I go it's the other way around
Give them the garages and let them park free
All those parking places will be left for you and me

(chorus)

Free parking downtown every day
Free parking let's give them all away
Burlington's a beautiful town, I'm here to say
Why chase all your business away?

The only hope for Burlington's to keep her alive
Let's cut out the inconvenience and let's cut out all the jive
Let's free the parking spaces, let's just give them all away
Make it easy for the people to come downtown every day

(chorus)

Free parking downtown every day
Free parking let's give them all away
Burlington's a beautiful town, I'm here to say
Why chase all your loved ones away?
Why chase all your business away?

Parody, Thomas E. "Implementation of a Peak-Period Pricing Strategy for CBD Parking" *Transportation Quarterly* Vol.38, no.1 (January 1984) pp.153-169

Parking Management Strategies as an Option to Alleviate Traffic Congestion.

Parody indicates that peak-period parking pricing strategies have been suggested as a method to force changes in SOV use, increase transit and HOV share, and reduce traffic congestion. This article is a description of the Madison, Wisconsin experiment, conducted by the Charles River Associates for the Urban Mass Transportation Administration (UMTA), 1980-1981, involving a peak-period (also called prime time) parking surcharge demonstration. The test had three transportation policy objectives:

1. Facilitate the availability of parking for short-term parkers - shoppers and visitors in the CBD.
2. Encourage the use of HOVs for long-term parkers in the central city.
3. Encourage increased mass transit share for peak-period commuters in the central city.

However, the stated main objective of the demonstration was "...to improve the utilization of parking spaces in the downtown area by discouraging individuals from making commuter trips to the CBD by automobile, thereby increasing the availability of parking spaces for midday shopping and personal business trips."

While four major public parking facilities were monitored for the effects of peak-period surcharges, shuttle bus service was instituted from three fringe area park-and-ride lots to increase the presence of transit in the CBD. The study is directed at the effects of the surcharge. The experiment was conducted in three steps:

1. The four main parking garages (76 per cent of the off-street parking controlled by the Madison Parking Utility) were converted from a mix of short-, medium-, and long-term meters to attendant operation, except for certain meters retained because of design considerations.

2. The three fringe park-and-ride lots were opened and the shuttle service initiated.
3. A \$1.00 "prime-time" (7 a.m. - 9 a.m.) charge for users parking over three hours was began at the garages only.

The author reported on four significant areas of the study results: changes in aggregate parking demand; changes in peak period travel demand; effects of prime time charge on auto occupancy; and effect on parking revenues.

Changes in Aggregate Parking Demand - Peak period (7-9 a.m.) occupancy decreased at the surcharge facilities and increased at the fringe lots. The non-surcharge lots filled earlier in the day than before the surcharge imposition. By 11 a.m. both surcharge and non-surcharge lots had reached normal capacities indicating that some peak-period arriving long-term parkers had shifted to the fringe lots/shuttle locations.

Changes in Peak Period Travel Demand - Only between 5 and 8 percent of the CBD commuting trips taken by pre-surcharge users of the prime parking facilities were switched to bus or park-and-ride modes. Additional changes indicated were: changed parking facility; parked at a meter in the same facility; entered the surcharge facility before 7 a.m. or after 9:30 a.m., or left within three hours to avoid the surcharge; carpooled; or stopped coming downtown.

Effect of Prime Time Charge on Auto Occupancy - Reportedly, about 6 percent of the parkers carpooled and auto occupancy for the entire population of off-street parkers increased by only about 1 percent.

Effect on Parking Revenues - This area was a major concern for the Parking Utility. The city determined that revenues increased during the experiment period primarily due to the replacement of the meters with an attendant operation. Accounting for revenues shifted due to changes in parking location or transit mode shares the prime time program resulted in increased overall revenue intake of \$6,000-10,000 per month.

The author concluded that the prime time charge "...had a significant influence on the travel and parking characteristics of many of the users of the four prime time facilities. Occupancies as of 9 a.m. in three of the attended surcharge facilities declined by about 40 percent."

Significant to the effectiveness of the study was the fact that all off-street parking available to the Madison public was under the direct control and operation of either the city or county governments (*i.e.* there was no privately-operated parking available to the general public). The county operated one facility with 1,004 spaces, while the City Transportation Commission managed some 3,690 spaces in the four garages and 13 parking lots. The commission has unified responsibility for transit, parking, bikeways, pedestrian facilities, taxicabs and traffic engineering activities. Parody notes that arrangements such as this may be necessary not only to carry out study experiments of this nature, but also "...in facilitating the planning and implementation of a coordinated transportation and parking program."

City of Pleasanton, California. Information Report 9C: "Results of the Transportation Systems Management (TSM) Program and 1993 Alameda County Congestion Management Agency Transportation Survey" (Pleasanton, CA: City of Pleasanton Planning Department, May 17, 1994)

Parking Management Strategies as a Traffic Congestion Mitigation Option.

The City Council of Pleasanton, California adopted a TSM Ordinance in October 1984 to help control commuter traffic and avoid potential traffic congestion problems. The overall goal of the TSM strategy was a 45 percent reduction in peak hour traffic. The completion of a major Interstate freeway had made Pleasanton especially attractive to expanding or newly created businesses locating in the East Bay area between Oakland and San Jose. The city was placed in a position of maintaining fiscally straining levels of infrastructure development or facing up to traffic congestion issues and designing a traffic mitigation program.

The 1984 TSM Ordinance (Section 17.24 of the Municipal Code) was amended in May of 1992 to incorporate the requirements of the Bay Area Air Quality Management District (BAAQMD) Trip Reduction Rules. The stated purposes for the establishment of the TSM Ordinance were:

1. Reduce traffic impacts by "...reducing both the number of vehicular trips and the total miles travelled..."
2. Improve air quality by reducing overall emissions.
3. Reduce energy use and ambient noise levels.

The City Council set the goals of the ordinance as:

1. Maintain the peak hour levels of service (LOS) at no worse than LOS C "...for as long a period of time as feasible and to exceed mid-LOS D only after TSM measures have achieved a forty-five percent (45percent) reduction in peak period employee commute trips at work sites required to have a TSM program."
2. Preclude reaching LOS E.

3. Reduce peak hour traffic volume by forty-five percent by:
 - a. Maximizing commute modes that are alternatives to the SOV;
 - b. Minimizing the percentage of employees travelling during peak hours.

The TSM ordinance requirements included:

1. Annual survey reports from every employer to establish "...whether the performance objectives have been met, ...commute pattern data, and to provide carpool and vanpool matching information."
2. Establishment of a TSM program by every employer with fifty or more employees, which included, but was not limited to, any or all of the following parking-related measures (out of the total of forty such measures indicated):
 - a. preferential parking for carpools and vanpools;
 - b. charges for employee parking;
 - c. elimination of any employer parking financial subsidy;
 - d. transition from employer parking subsidy to general transportation monetary allowances for all employees;
 - e. free or reduced parking rates for carpools and vanpools;
 - f. preferential parking for clean fuel vehicles.
3. The establishment of a TSM Task Force.
4. Provisions for enforcement.

This report, based on the 1993 survey and employer TSM Program self-reports, showed that "...an average of 46 percent of the employees working for large employers and tenants in complexes use commute alternatives or commute off-peak" and that the level of service "...throughout the City continues to be LOS C or better with only one exception."

Cooperation appears to be the backbone of the success of Pleasanton's TSM program. The 1993 survey was sent to 29 complexes and 59 large employers with a total employment of 20,751, with a 71 percent response rate. According to the survey analysis, average vehicle ridership (AVR) reached 1.12, but driving alone (79 percent) was still the preferred commute mode. Eleven percent of the respondents carpooled. Transit level was low (1.4 percent) which may indicate a lack of serious public mass transit availability rather than employee preference; however, because the largest number of employees (5,010 or 35 percent) lived twenty-one plus miles from their place of employment, transit logistics may have played a more important role than transit choice.

The TSM Task Force selects certain programs for special awards presented at an annual reception. According to this year's report, the employer receiving the "Best New Program for 1993" (Pacific Bell, a 60 percent reduction in employee peak trips), the "Complex Highest Rate of Commute Alternatives Use" (Hacienda Plaza, twenty percent alternative modes), and the "Best Overall Results" (EG&G Energy, 90 percent reduction), all included preferential parking for carpools/vanpools as part of their programs.

A review of the Pleasanton municipal code off-street parking requirements (Chapter 18.88) indicates no special off-street parking provision requirements. The overall design and implementation (and enforcement provisions) of the TSM program itself, the cooperative arrangements between the city and the various large and small employers, and the level of citizen concern for the environment in the San Francisco Bay area appear to be the basis for the strategy's success in mitigating traffic congestion. According to the Pleasanton TSM Coordinator, Diana Bonnano, the city is continuing its innovative policy reforms by investigating the implementation of employer cashout programs and/or parking tax ordinances for future congestion relief - if required.

Municipality of Metropolitan Seattle. Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Using grants from the Urban Mass Transportation Administration (UMTA) and the Federal Highway Administration (FHWA), the Association for Commuter Transportation (ACT) and the Municipality of Metropolitan Seattle (Metro) assembled, for the first time, a group of recognized experts focussing on the topic of parking policy reform. Many of the papers presented at that conference are abstracted elsewhere in this study. The symposium developed four policy initiatives, twelve challenges, and ten "astounding facts" as follows:

Policy Initiatives -

1. States and municipalities need to press their congressmen for a national initiative to amend the federal tax code so that the value of any commute benefit (including parking) that exceeds \$60 is taxed (and any commute benefit under \$60 is tax-free.)
2. Similarly, the IRS should be pressured to amend the federal tax code to require that employers who offer an employee a parking subsidy must also offer that employee the option to take the market value of the parking subsidy as a taxable cash travel allowance in lieu of the parking subsidy.
3. Also Congressional pressure should be brought to bear on the IRS to amend the tax code to reclassify employer-provided parking as a taxable fringe benefit.
4. Mandate a state level congestion relief program with TDM and parking elements.

These initiatives seem to indicate the participant's belief that parking as an issue can be constructively addressed on the federal level. However, recent attempts to change the IRS rules regarding the \$155 per month parking subsidy have been thwarted by the IRS itself. Because the issue of parking policy reform does not have the constituency size or voice as does the issues of road building or development support, one cannot expect federal assistance on bringing parking policy in line with what has been suggested by the symposium participants.

Challenges -

1. Existing zoning code-based parking requirements typically result in parking supply far in excess of demand, except in central business districts. The challenge is to change these codified parking over-supply mandates on a consensual basis.
2. The demands of lenders result in a supply of parking more generous than that dictated by local municipalities. The challenge is in overcoming this myth of the market. According to the publication, during one panel a developer noted that the role of lenders is much less significant than commonly perceived. Lenders generally question developers about supply ratios only when there is a proposal to vary widely from normal standards. The governmental role is to create new local standards.
3. Because building owners commingle (hide) parking and office space revenues in tenant leasing agreements, it is difficult for tenants to negotiate rental reductions when they propose reductions in parking space demand. This lessor culture makes it especially difficult for municipalities to make after-the-fact parking reduction arrangements with employers as segments of TDM programs.
4. In a similar vein, because of this commingling, building management companies have little incentive to cooperate in parking reduction programs once a development is built.
5. Private sector parking lot or garage operators also have little incentive to cooperate in parking demand reduction programs. One of the most vociferous opponents of any alternative to SOV proposals is the National Parking Association (NPA) which editorializes against pedestrian ways, TDMs, TROs, TMAs, bike lockers, or parking cashouts. Because many urban parking facilities are controlled by private sector members of the NPA, this results in some potential sources of conflict regarding parking policy reform.

6. There has been an on-going socialization process in the minds of American employers and employees of the expectation of immense supplies of free (or at least low-cost) parking in the immediate proximity of activity centers. This ingrained belief is one of the most difficult challenges faced by parking reformers.
7. For employees, parking is a transparent issue, that is, they simply do not think about parking until their individual status is jeopardized. When questioned however, they consider free parking a benefit.
8. While jurisdictions may implement a "parking tax", the impact of such a tax on commuter mode shift depends on the extent to which such a tax is passed on to individual parking users.
9. No amount of government-supported subsidies for HOV mode use will offset the inducements of employer-provided parking.
10. Market demand forces will not result in constraints on suburban parking supplies for a long time. There is such an over-supply of suburban parking that no policy reforms can effectively address overall intrasuburban commuter mode choices. This is due also to the difficulties that transit infrastructure has in following intrasuburban commuter patterns.
11. The federal government is one of the largest (and the most visible) supplier of free parking throughout the country. From the reserved premium parking spots at Washington National Airport to the recent IRS decisions on the \$155 per month parking rules, the federal government can often offset attempts at parking policy reform.
12. Market forces must be used to reshape the manner in which owners, tenants, and commuters perceive parking needs. The challenge for government agencies is in how to successfully drive the parking user market.

"Astounding Facts" -

1. Nine out of ten American commuters who drive to work park for free. (And 75-80 percent of commuters drive alone).
2. In Los Angeles more than half of the office workers who drive to downtown receive employer-subsidized parking, and half of those park free.
3. A study of five California employment activity sites, employer-paid parking increased the number of cars driven to work by 37 percent.
4. Estimates of the average value of an employer-subsidized parking spot can reach \$1000 per year - tax free.
5. When employers charge employees the market rate for parking, SOV use declines by 20 percent at that site.
6. Seven of the eleven best performing TDM programs as evaluated by the FHWA included employee parking charges.
7. Imposing an \$8 per day parking charge for employees can reduce parking user demand from 2.45 spaces per 1,000 GSF to 1.74 spaces.
8. According to a 1986 study by the Urban Land Institute, even when suburban business parks were well leased parking space demand was only 47 percent of supply.
9. Federal tax policy considers any commuter bus subsidy over \$15 per month as taxable income, while employer-provided parking is tax-free.
10. If the value of employer-provided parking was considered as a taxable benefit, the estimates of additional federal tax revenue reach \$5 billion annually.

Municipality of Metropolitan Seattle. "Managing Employee Parking in a Changing Market" the *Proceedings of a Workshop for King County Employers: November 3 [Seattle] and 4 [Kirkland], 1993*

Parking's Role in Economic Growth and Development Attractiveness from both Public and Private Sector Perspectives.

These two half-day symposia were designed by the government and quasi-government agencies (The Economic Development Council of Seattle & King County; the City of Seattle; King County; Metro, the regional transit agency; the Washington State Department of Transportation; and the Washington State Energy Office) that put them on to "...provide both downtown and suburban employers background information on parking cost as well as introduce parking strategies that have worked for some companies in the Seattle area. One goal of the workshops was to enable the public and private sectors to learn from each other by working together to find solutions to the issues involved in reducing employer-subsidized parking." In other words, the public sector and private sector working together to educate each other to facilitate mutually satisfactory solutions to the problems of employer-paid parking, congestion mitigation, transit mode share enhancement, and sound development for economic growth. No papers were presented. Therefore, rather than abstracts from presentations, this part of *Appendix A* will consist of excerpts from the statements, question and answer sessions, and conference conversations. Everything following should be considered as being in quotes except as noted by [brackets].

Urban Workshop Keynote Speech

- Tom Sanger, Executive Director: Washington Transportation Policy Institute

There is no such thing as a free lunch or free parking.

Every city in the state [Washington] has parking tax authority now. We should not depend on the cities never using it, as other transportation taxes are difficult to increase.

Eliminating or reducing parking subsidies represents an opportunity to cut your operating costs if you are an employer or property manager, or to cut your project costs if you are a developer.

Employers should NOT be expected to provide parking for employees.

Case studies show that 20 percent of commuters shift from SOV to HOV when they have to pay market rates for parking. There are excellent win-win possibilities with parking management strategies.

Employer-subsidized parking is widespread. It's always been considered a traditional benefit like employer-paid health care. This stems from government regulation which has created an oversupply and under-pricing of parking. We need to go to market pricing. Local zoning codes typically require too much parking. Bank financing requirements are often half the amount required by local jurisdictions.

"Times Are Changing" Panel Discussion

- Gary Lawrence, Director: City of Seattle Planning Department

Parking issues cannot be solved by focusing only on parking. The primary issue is related to travel behavior. It's a freedom issue. We've been told that being free and driving are the same thing. Very significant social changes are now needed.

Travel behavior during the week requires people to make linked trips to meet daily needs. The transit system is focused on the 20 percent of the trips that are commute trips.

In downtown [Seattle] right now there is an oversupply of parking. But placement of that parking doesn't make it convenient for retailers. There are three kinds of parking: 1) storage, 2) long-term parking, and 3) short-term parking. When public policy requires too much parking, it's because of neighborhoods. Local governments get criticized for trying to get employees to change their behavior. But the marketplace is also trying to change people's behaviors. Unless we stop public policy choices that perpetuate reliance on autos, this will become an undesirable place to live. Seattle is trying to work on the mobility side of things at the same time as intervening through the regulatory structure.

There is no such thing as free parking. The cost of parking is added on to the price of goods. It doesn't make sense that it's cheaper to park a long time than to park a short time.

There is currently a debate on regional parking policies. We are moving away from the notion that government's responsibility is regulation to the notion that government's responsibility is facilitation. We are trying to get more sophisticated on needs for long-term vs. short-term parking. We are working closely with Metro [the Seattle area regional transit authority] on linked trips and getting transit service in neighborhood hubs.

Consciousness about both land use and transportation will be more important in the decision-making process.

Urban Workshop Wrap-Up: Strategies for Action

- Bill Roach, Supervisor: Metro Market Development Section

On the issue of zoning code requirements, we are trying to get suburban jurisdictions, in particular, to level the playing field and lower their parking requirements. We've done a lot of work in the last few years on zoning codes, how we can make them more flexible, more responsive to a changing set of demands. We believe the public sector can do a lot of looking at itself, at its own regulations, ask itself the question, "Are these regulations still working?" Most of the parking codes were established in the 70's and 80's, when the concern was moving cars. Are they still working today in the 90's when the main concern is to shift to moving more people?

A number of ideas for dealing with our transportation problems are out there. We'd like to hear about them. I encourage all of you to work with each other and with public agencies to develop creative ideas for better management of employee parking.

Suburban Workshop Panel Discussion

- Larry Springer, Planning Manager: City of Federal Way

From the perspective of local government, the question of whether charging for parking or restricting parking is a good idea, depends on what your objectives are. If we're trying to clean up the air, if we're trying to have a more efficient transportation system, if we're trying to figure out how to live better at higher densities, I think it's an excellent idea. [One of the other panelists] has talked to you about the cost, the subsidy involved in parking in suburban areas from the private operator perspective. I think there is also a real significant public cost that we're just starting to deal with now in this state to the kind of transportation system we have [sic]. SOVs are tremendously expensive. It takes an incredible road network, and the number of vehicle trips in the last couple of decades is increasing two and three times faster than the number of households and the number of vehicles available. It's obviously real nice for the individual - lots of flexibility - but are we willing to pay for the road system, the number of signals and the freeway? We haven't been in the past and we're approaching gridlock. So we've got to do something else. That's why high capacity transit is on the table in the Northwest. One of the things research shows that helps people make the transition from [the] SOV is restricting parking at the workplace or charging for parking at the workplace. I think [one of the other panelists] can give us information about what the research shows in terms of charging [for] or restricting parking and what it does to encourage HOVs. It's very significant and local government is very much in favor of it. Is it politically difficult? Yes, it is. I've been part of a work group here in King County [composed] of people like myself, planning directors, working on this issue of parking. Most of us are really into the topic, but I think we're also very sensitive to what our elected officials have to deal with if we start talking about charging for parking or ratcheting down the supply of parking below what the demand is in a suburban context. It's extremely difficult. I guess that's why I'm here talking to you folks, because you can help make it happen.

Question: What about the local level in terms of employers in your city and also elected officials?

-Springer

I think what we've got here is a chicken and egg problem. The marketplace is saying we don't want restricted parking on sites because there isn't an alternative to single occupant vehicles. HOV programs are springing up gradually, but basically for suburban areas there's not real good bus service. ...The marketplace is saying "Gee, I don't want to go out to a site in the suburbs and have instead of six spaces per 1,000 [square feet], three spaces per 1,000 and not be able to attract tenants because there aren't good transportation options. Metro will tell you, "Gee, we'd love to provide you transportation, but you folks have densities of two housing units per acre out there in the suburbs and the employment densities are equally low, and, quite frankly, it takes...higher employment densities to provide good bus service." So I think what we're trying to do with the parking issue is break into this vicious circle. We're trying to do small incremental things to increase densities, encourage other types of HOVs, carpools and vanpools. ...So what we're trying to do is take small steps by restricting parking and looking at parking policy as a way of getting individuals to say "Gee, maybe we could do this a different way." And then the marketplace says, "Well, HOV is working, and some of these parking things are working, so maybe we will lease these buildings." Then some of the finance industry gets a little more confident and gradually over the course of 20 years we have a much better public transportation system, we use land more efficiently, air quality gets better, people's lifestyles have changed in ways they're comfortable with, and I think what we're trying to do is take small incremental steps without terrorizing anybody and giving people choices they don't currently have.

Comment by Brad Parrish, Marketing Director: AMPCO Parking

I'd like to make one comment. You know, land use is obviously the biggest issue as far as parking is concerned. One of the other things to keep in mind for those who are in local government or county government is that a lot of office developments have been built without any services on site. What we hear from employees is that if I want to go out and have something to eat I've got to drive because there is no bus service. So even though they may do it only once a week the fact is they like flexibility. If there were services on-site you'd have more flexibility for people who come by carpool or bus.

-Larry Springer

I couldn't agree with that more, but I go back to the chicken and egg problem. Suburban office buildings are traditionally on a parcel surrounded by a sea of parking, some of them so big that people can't even walk across them. What we're talking about is the need to redesign suburban areas to get higher densities so people who come by bus could conveniently walk to a deli or drycleaning within that office complex. But we're not designing them now. We're trying to encourage the development industry to start looking at these kinds of things. So here's another opportunity for incremental change, but it's difficult because we've always seen these buildings in the middle of a sea of parking. Lenders feel that's what the market wants, and if you're not proposing that they won't lend developers the money to do it. Again, another small step, incremental change, providing choices that people don't have right now.

The types of things we can do with parking in suburban areas are currently different from the kinds of things we can do in downtown Bellevue and Seattle because of the difference in accessibility to public transportation. Over the long term, I see this gap closing, making it easier to initiate more aggressive parking management strategies in the suburban areas.

Initiating a Parking Charge in a Setting with Adjacent Free Parking

- Dianne LaMonica, Transportation Specialist: Association of Washington Cities

This can become an enforcement issue when an employer institutes a parking charge and employees start to park in lots of adjacent buildings. This happened in Bellevue, where nearby landlords were not happy and posted signs.

One of the reasons the Bellevue TMA came into being was to enforce [against] encroachment into free parking when businesses were starting to charge for parking. People who were towed would consider it the cost of parking.

In Federal Way spillover is not a problem now, but could be a future problem. Jurisdictions in King County are trying to develop consistent codes.

Developers don't want to provide any more parking then they have to.

Key Points:

Encourage local jurisdiction consistency to achieve a level "playing field."

Charge for permit or parking, and use the revenue for TDM measures. Local jurisdictions could adopt a parking tax to increase the cost of parking.

Suburban Workshop Wrap-Up: Strategies for Action

- Bill Roach

What I'd like to do is focus on what can be done on the public sector side. One point...that was brought out...was the need for different organizations with like problems to get together to brainstorm. A good example is the Seattle Hospital Association, all of whom have similar, very unique problems that they all face.

Another point...was the work that needs to be done at the local jurisdiction level. We've done a lot of work in the last few years on zoning codes, how we can make them more flexible, more responsive to a changing set of demands. From our way of thinking, we believe the public sector can do a lot of looking at itself, at its own regulations, and ask itself the question, "Are these regulations still working?"

A third point...was the Commute Trip Reduction Law and the Governor's Task Force. That law was written in such a way as to require us to come back together on a regular basis to see what works and what doesn't work. The Legislature was very clear about this. We need to come back together in 1995 and ask "How is this working? Is this structured correctly or not?" So there's a real opportunity...to be a real participant in this so we can make this successful. I personally believe we can make this work if we use a collaborative approach, a uniquely Northwest kind of approach

Shoup, Donald C. & Don H. Pickrell "Problems with Parking Requirements in Zoning Ordinances" *Traffic Quarterly* Vol.32, no. 4 (October 1978) pp.545-561

Parking's Role in Encouraging Single-Occupant Vehicle (SOV) Travel.

Although this article was published in 1978, a number of the problems pointed out by the authors remain as factors to be addressed in present circumstances. Shoup and Pickrell suggest that because land-use zoning should be directed towards the goals listed in the *Standard State Zoning Enabling Act* (to promote health, safety, morals, general welfare, the adequate provision of public services, lessen congestion, etc.) that may not or cannot be addressed by the land market, that there is "...a distinct possibility of doing more harm than good by using zoning to resolve a problem that is only indirectly related to the land market." They go on to indicate the following flaws in this land-use zoning approach:

1. There may be only a tenuous and casual linkage between explicit zoning intervention in the market, the ultimate consequence hoped for, and the perceived problem;
2. The zoning approach may give the impression that something has been done and a solution arrived at, regardless of the linkage or lack thereof between the intervention and the actual problem addressed;
3. The zoning approach disguises the true cost of the intervention because the cost of compliance is not considered in the public budgeting process;
4. If the perceived problem addressed by the zoning intervention is not a land-use market problem, inefficiencies in land use or other unintended consequences may occur.

On the other hand, the authors give two reasons why land-use zoning approaches to problems in non land-use markets are sometimes chosen:

1. An unwillingness or inability to intervene in the malfunctioning market. They give traffic congestion as an example. If the traffic market were addressed by road

pricing to alleviate congestion, the effect intended would be direct but the implementation and enforcement would be politically impossible, therefore zoning density limitations are used to effect traffic congestion.

2. The zoning approach gives the impression of a solution without the expenditure of public funds.

Using parking requirements in zoning regulations as an example, Shoup and Pickrell state that the varieties of requirements, the differences in dimensions for parking spaces, the multitude of methodological approaches in their development, and the apparent randomness in the selection of measurement standards, result in a systemic and unwarranted presumptiveness of effectiveness. They also state that parking regulations' one common theme is "...the 'rule of thumb' air about them and the apparent lack of consideration given to the cost of providing the spaces or the price that will be charged for using them. The assumptions appear to be that trip generation rates and parking demand reflect a 'need' to travel by automobile and that demand for parking spaces is not a function of price." As an example of the variations in requirements, the authors included a table of municipal parking space requirements for a single land use (a 10,000 square foot office building of three floors) from nearly 70 California cities. Cumulatively, these amounted to fifteen different categorical totals of parking spaces, ranging from a low of 10 (Long Beach and Vernon) to a high of 80 (Placentia); and these were just in the Los Angeles-San Bernardino area.

The authors suggest that this detailing of numerical parking requirements in zoning regulations "...implies that planners know how to tailor the parking supply to differing local circumstances. But the difficulty inherent in taking these decisions out of the private market is illustrated by the fact that some planners recommend zoning regulations to force the supply of parking *above* the quantity that would be provided by the private market, while others recommend an upper limit on the number of parking spaces to reduce the quantity *below* what would be provided by the private market - both with the goal of reducing traffic congestion." [italics the authors'] They admit that both approaches are logical, depending on overall objectives: increased parking at a development may reduce local street congestion, while limited parking may result in a general reduction in automobile use.

Shoup and Pickrell also analyzed four justifications for the use of zoning regulations as an instrument of parking policy:

Reduction in "Cruising" [for parking spaces] - zoning regulations establishing off-street parking quantities to eliminate or reducing parking users "circling the block" hoping that an economical parking space will become available are ineffective because they do not address the economic aspects of this user behavior. The authors suggest that increasing the price of on-street parking would increase turnover precisely where the market is in action - on the streets.

Reduction in Parking Spillover - zoning regulations requiring off-street parking quantities safely in excess of projected development demand is often used in mixed-use (office/residential) areas to preclude local residents' complaints about on-street spillover from such developments. The authors suggest that residential parking permits (and enforcement) may be a more effective method to alleviate spillover parking problems.

Encouraging Downtown Growth - the authors suggest that zoning regulations requiring "sufficient" parking to meet projected demand in new downtown developments ignores two aspects of the parking market. One is that too many parking spaces in a CBD will result in parking prices below the cost of providing and maintaining them. Second, too many parking spaces creates the impression that everyone heading for the CBD can find a place to park, so everyone takes their car, increasing overall congestion in both the CBD and on the feeder routes to the city center. The health of a city center should not be equated with the number of cars that can be driven there and parked.

Meeting Residential Parking Needs - zoning regulations for purely residential areas (detached single-family houses) are primarily aesthetic rather than needs-based as long as residential on-street parking is unpriced.

Shoup and Pickrell state that zoning regulations requiring parking supply minimums actually have two market effects:

First, they increase the overall supply of parking to levels above the market-determined equilibrium level, depressing the price. The authors indicate that there is inferred evidence to suggest that "...zoning codes [that result in such levels] of inefficiently large amounts of parking space [such] that new parking garages are rarely built as independent commercial ventures." This oversupply and underprice also results in encouragement of SOV commuter travel mode selection.

Second, they spatially determine the distribution of parking rather than let the parking user market demand and cost considerations determine parking user patterns. In cities where zoning codes do not specify minimum requirements, "...submarkets for parking are likely to develop in response to spatial differences in demand and supply functions for parking spaces. That is, parking services will be sold at different prices in differing geographic locations within the downtown area. Demand for parking at each location will depend largely on the density of employment and shopping in the immediate area, the price and service levels of public transit, and travelers' incomes," and parking prices "...thus act both to allocate the quantity of land and capital devoted to parking in different parts of the downtown and to ration the number of automobile trips destined there."

The authors studied the impacts of zoning regulations that required developers to oversupply the parking user market in an attempt by public policy makers to affect a non land-use market problem - traffic congestion. Well-intentioned planners assumed that more off-street parking would result in more cars being taken off the city streets. The planners did not recognize that the parking user market would react as it did, even though conditions that the planners assumed to exist - development-induced demand - did, in fact exist. The unintended consequences of the planners use of zoning land-use regulations to affect a traffic-oriented objective did, however, supply evidence to suggest that opposite measures (reducing parking supply) could in practice reduce traffic congestion.

Shoup, Donald C. & Richard W. Willson. "Employer-Paid Parking: The Influence of Parking Prices on Travel Demand" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Parking's Role in Encouraging SOV Travel.

Shoup and Willson argue in this paper for the program known as "parking cashout option" where "...an employer who offers any employee a parking subsidy should be required (either by local ordinance or by the internal revenue code) to offer that employee the *option* to take the fair market value of the parking subsidy as a cash travel allowance instead of as a parking subsidy." They also argue that requiring employers "...to offer employees the *option* of the equivalent cash value of any parking subsidy would reduce traffic congestion, air pollution, and gasoline consumption, and *would do this by aligning commuters' travel choices more closely with their own preferences.*" [italics the authors']

The authors state that certain basic facts about parking are becoming known from past studies. Among these are "[n]ine out of every ten American commuters who drive to work park free", for which they cite results from three study results: Shoup and Pickrell's 1980 analysis of National Personal Transportation Study data (93 percent of commuters parked free); Commuter Transportation Services' 1988 survey in Los Angeles, Riverside, San Bernardino, and Ventura counties (91 percent); and the 1989 CUTR survey (90 percent). They also indicate that even in congested (and expensive to park) city centers most commuters pay nothing for parking, citing their own 1990 estimate that of some 114,000 office workers who commute to downtown Los Angeles, 47 percent pay nothing to park and an additional 7 percent receive parking subsidies.

Shoup and Willson recognize that subsidization creates demand and they argue that the existing heavy subsidization of employee parking by employers creates a market anomaly. Indeed, they state that "...employer-paid parking so heavily subsidizes solo driving to work [that] it undoubtedly increases the amount of it." Using a Logit model, they develop two specific measures to summarize this effect.

1. The share of commuters who drive to work alone. Using five case studies their analysis points out that, as an average, when the employer provides parking 66 percent of commuters drive alone (range: Ottawa, Canada 35 percent to Century

City, Los Angeles 92 percent) but when the employee pays for parking the solo share drops to 39 percent (range: Mid Wilshire, Los Angeles 8 percent to Century City 75 percent) resulting in an average decrease in solo drivers of -41 percent (range: Century City -18 percent to Mid Wilshire -81 percent).

2. The number of autos driven to work per 100 employees. Using the same five case studies, Shoup and Willson showed that, as an average, when the employer provides parking the car/employee ratio is 70 out of 100 (range: Downtown Ottawa 39 to Century City 94) but when the driver pays for parking the average drops to 51 per 100 (range: Mid Wilshire 30 to Century City 80) resulting in an average decrease in autos per 100 employees of -27 percent (range: Century City -15 percent to Mid Wilshire -38 percent).

Additional logit analysis tables showed that increases in both carpool and transit mode shares could be accomplished based on various parking pricing scenarios. As an example, when a case was analyzed using a parking subsidized mix of 67 percent solo, 16 percent carpool, and 18 percent transit, changing parking to \$6 per day (from \$0 per day) resulted in a new mix of 48 percent solo, 22 percent carpool, and 29 percent transit under otherwise ideal conditions. Another Logit analysis produced a graph showing that if in the case above parking demand at \$0 was 2.45 spaces per 1,000 square feet, raising the cost of employee parking to \$6 per day reduced demand to 1.9+ spaces per 1,000 square feet.

The authors concluded that the case studies suggested that "...on average, employer-paid parking increases the number of cars driven to work by 37 percent" and that their downtown Los Angeles logit model analysis indicated that "...employer-paid parking increases the number of cars driven to work by 20 percent."

The use of multinomial logit analysis advances this area of research because it moves beyond case studies to examine very large sample sizes; controls for other variables affecting commuter mode choice; and permits an accurate assessment of the mode share effect of employer-provided parking. According to Shoup and Willson, the model estimates accurate data "...on the *after-subsidy* price of parking, so that the influence of parking prices on travel choices is not masked by employer-paid parking subsidies." [italics the authors']

Shoup, Donald C. & Richard W. Willson. "Employer-Paid Parking: The Problem and Proposed Solutions" *Transportation Quarterly* Vol.46, no.2,w (April 1992) pp. 169-192

Parking's Role in Encouraging SOV Travel.

Shoup and Willson are the predominant authors addressing what they feel is the crucial problem in parking policy - "free" parking supplied by employers to their employees. The authors feel that this fringe benefit, which has been a traditional linchpin of employer/employee relations for decades, is the driving factor behind the dominance of SOV commuting. They argue that employer-paid parking is actually a form of subsidy that reduces the cost of driving alone to work to such an extent that free parking is worth more to commuters than free gasoline would be. Additionally, they hypothesize that gasoline taxes would have to be raised by \$2.29 per gallon to offset this subsidy before commuters would change their travel patterns.

They propose that public policy require that in lieu of free parking employers offer their employees the option to receive an equivalent (and taxable as income) cash commute allowance, or an equal mass transit or ridesharing subsidy. Based on data collected in the Los Angeles area, they predict that in an area where there is free parking and transit mode share is 15 percent, if the free parking is made unavailable, transit share rises to 31 percent. They also address the issue of free parking on the federal level, declaring that the untaxed (up to a value of \$155 per month) value of the parking subsidy is missed revenue for the country. They claim that their model predicts that the introduction of the taxable cash commute allowance option would cause a 17 percent drop in SOV mode share and a 67 percent increase in transit ridership. They conclude that requiring employers to offer these three options would "...reduce traffic congestion, improve air quality, cut gasoline consumption, enhance employee welfare, and increase tax revenues without increasing tax rates."

Shoup and Willson are the most vocal opponents of employer-paid parking, they have argued for legislation on the federal level that recognizes the financial benefit to employees of "free" parking and taxes such parking as income.

Smith, Steven A. & Alexander J. Hekimian. "Parking Requirements for Local Zoning Ordinances" *ITE Journal* Vol.55, no.9 (September 1985) pp.35-40

Parking's Use as a Governmental Control for Land Use and Zoning.

The authors' article is based on their larger study, Parking Policies Study for Montgomery County, Maryland (Maryland-National Capitol Park and Planning Commission, November, 1982) and certain parking requirement ordinances adopted by the county in 1984 that were based on that study. The issues that arose during that study were common ones found in many jurisdictions across the country at that time. The authors recap the traditional roles of parking requirements in local zoning ordinances: ensure sufficient parking off public streets; enhance access; improve traffic circulation; and help prevent neighborhood nuisance parking problems around employment and activity centers. These roles must be balanced with others, however: providing incentives for certain types or mixes of developments; and the use of alternative travel modes such as carpools, vanpools, and transit. Parking policies must be based on the relative importance of each role as applied to specific uses, scales, and locations. The methodologies used in the larger study were typical for labors of this nature: compile existing data; collect new data on parking and travel behavior at various land use type locations; review other jurisdictions' zoning regulations; and conduct interviews with developers, public managers, citizens and others. The study covered four land uses: office, retail, hotel, and multi-family residential and the basic intent was to not only study actual parking patterns but to develop the foundation for parking regulations flexible enough to accommodate density and travel mode shares at each land use.

Office Buildings - The results of data on nearly 70 office building sites indicated that while most parking space zoning requirements at that time (1982) were set within a range of 3 - 3.5 spaces per 1,000 gross square feet (GSF) of floor area, actual use requirements fell in a range between 2.5 and 3.5 spaces per 1,000 GSF, with clustering based on location. Parking ratios in the Washington, DC central business district (CBD) ranged between 0.5 and 1.0 per 1,000 GSF. The study indicated that employee density was the most important factor in parking space ratio determination and only five suburban sites demanded more than 4.0 spaces per 1,000 GSF. The finalized parking requirement adopted for office developments resulted in a matrix system based on proximity to Metro (the DC rapid transit system) stations as one axis and general location (CBD, moderate density, suburban, rural) as the other axis. The minimum requirement (less than 800 feet to Metro station/CBD) was 1.9 per 1,000 GSF, while the maximum (more than 1600 feet

from Metro/rural) was set at 3.0 spaces per 1,000 GSF. An additional allowance of up to 15 percent reduction in required spaces was made for developer implementation of ridesharing programs.

Retail Uses - Data was collected at 35 sites throughout Montgomery County (it did not include any regional malls) during the seasonal peak shopping period (Saturdays between Thanksgiving and Christmas 1981). Again, the goal was to develop flexible baseline standards for zoning regulations with allowances for relatively high turnover excess. The base requirement was set at 5.0 spaces per 1,000 GSF with exceptions for certain uses, and with a reduction of 15 percent available for uses within 1,600 feet of a Metro station. Additional flexibility was built in for mixed-use (office/retail) locations.

Hotels - Parking requirements for hotels are generally based on the number of guest rooms (usually 1 space per room) with provisions for additional parking spaces for on-site restaurants/lounges. Data was collected on 14 hotels within the county which verified the normality of the actual use as matching set requirements. Hotels operators usually provided 1.1 - 1.9 spaces per room, erroring on the high side due to peak demands based on seasonal uses (weddings, Christmas parties, New Year,s Eve) or meeting requirements. Again, flexibility was the planners goal and a system of variable requirements was adopted based on rooms/auxiliary facilities as one factor and location as another.

Multiple-Family Residential - According to the authors, the mean requirement for multiple-family dwellings as reported in Zoning, Parking, and Traffic (Eno Foundation, 1972) of 1.2 spaces per unit was verified by their research. Additionally, however, their research indicated the possibility of reducing this standard requirement for residential developments in suburban central business districts due to the types of tenants (transit-dependents and the elderly) and the proximity of transit facilities. Therefore Montgomery County allowed a 10 percent reduction for developments within the suburban CBDs and an additional 5 percent reduction for developments within 1,600 feet of a rail transit facility.

The authors also looked at three facets of parking policy itself: shared parking, provisions for small cars, and maximum parking requirements.

Shared Parking - This refers to the use of a common parking area for two or more distinct uses when those uses have differing temporal parking demands, creating the opportunity to supply less parking overall than would be required if each use were treated as a separate demand. They defined four prerequisites to judge the practicality of the shared parking option:

1. Existing parking requirements for the individual uses involved must reflect the actual peak demand for such a use. If the existing requirement is too low then the additional reductions available through shared parking will result in an undersupply condition.
2. The land uses that are intended to use a common shared parking facility must be close enough to the facility and to each other that most parkers would be willing to walk to either building from their parking space. Uses do not have to be in the same building, however.
3. "Operators of a shared parking facility should be prepared to work out localized parking shortages and provide proper information and traffic [vehicle and pedestrian] direction."
4. Parking spaces that are reserved for individuals or groups on a 24-hour basis cannot be part of the quantities of spaces counted as shared parking.

The authors developed a matrix based on land uses as one axis and five columns of percentage of peak demand by time periods as the horizontal axis. These percentages are then used to multiply the amount of parking required for each land use to arrive at totals of shared parking spaces which may be supplied by the developer. The ordinance adopted by Montgomery County was considered to be conservative by the authors so as to avoid shortages. Smith and Hekimian suggest that large cities may make adjustments to the basic formula by including the capacities of local on- or off-street public parking spaces to count for some off-peak (evening or weekend) uses.

Provisions for Small Cars - The 1980s saw the development of the down-sized car and this led to much debate at the time of this article regarding the physical size requirements for parking spaces. The authors surveyed 26 parking lots and worked out a percentage mix formula for the ratio of small car parking spaces per facility. The County chose another method to handle the mix by adopting a new universal space size standard of 8.5 feet by 18 feet for all parking spaces in new development for six reasons:

1. The standard one-size-fits-all simplified the parking regulations for planners, developers, lenders, and zoning inspectors.
2. It eliminated any enforcement problems caused by large cars squeezing into the available small car spaces.
3. It made architectural plan space design and calculations easier and simplified plan reviews.
4. It avoided the potential problems associated with having to change or adjust space size ratios as fleet size ratios changed over coming model years.
5. It improved circulation of traffic by eliminating the search for the "correct" size parking space by commuters or visitors.
6. It eliminated parking user frustrations and complaints if ratios did not match user fleet size makeups before they could become an issue.

Maximum Parking Requirements - The authors' interviews with private sector developers and public agency representatives indicated that the market (the costs of land and of per-space parking construction) restricted parking supplied to the regulated minimums. All the actors indicated that setting maximums for suburban supplies could cause local parking spillover into residential areas as uses changed during the life cycle of a development, except in locations proximate to transit facilities.

The authors concluded by observing that zoning ordinances for parking supply regulation involve a complex mix of land use and transportation issues that must be balanced through the use of localized determinants (development density, land use based demand data, proximity to transit, land and construction costs), flexibility in requirements, and accurate assessments of actual needs.

Smith, Thomas P. Flexible Parking Requirements (Washington, DC: American Planning Association, 1983)

Parking's Use as a Governmental Control for Land Use and Zoning.

Smith's work is a 1983 survey of some typical flexible local parking and zoning ordinances extant at the time of its publication. He recognizes that creating parking related zoning codes and parking policies is a constant balancing act, one that must accommodate various land uses, employment center locations, power struggles between developers and parking administrators, transit facility proximities, seasonal peaks of demands, local customs, rules of thumb, safety and security, equity issues, environmental issues, and energy and resource conservation mandates. Smith points out that local planners and transportation managers were beginning to recognize that parking policies could be used as a tool towards traffic congestion mitigation by encouraging carpools and transit use, as integral parts of traffic circulation programs. He also indicates that there were innovative (at that time) new policy approaches being developed in some areas, including: the encouragement of flexibility in parking requirements; "trading off" parking requirements for developer/employer commitments to carpooling or ridesharing; recognition of the opportunities for shared parking; broader and deeper studies of actual local parking demand; and the use of parking management ordinances. Although over 10 years old, Flexible Parking Requirements presents not only an overall perspective on what can be done to create "flexibility" in parking requirements, it also has examples of specific ordinances, including: *Parking Regulations Encouraging Historic Preservation* (Washington, DC); *Sample Zoning Provisions for Off-Site Parking* (Irvine and San Mateo, CA, Arlington County, VA); *Examples of Fees-in-Lieu of Parking Ordinances* (Mill Valley and Burbank, CA and Lake Forest, IL); and *Examples of Parking Management Ordinances* (Norwalk and Los Angeles, CA, Schaumburg, IL and Bellevue, WA) in appendices.

Smith, Wilbur S. "Automobile Parking Trends" *Transportation Quarterly* Vol.37, no.3 (July 1983) pp.431-452

Parking's Role and Function in Economic Growth and Development Attractiveness From Both Public and Private Sector Perspectives.

Smith introduces this article with an insight as to the overall importance of parking policies in transportation and land development: "Where to locate parking, how much to provide, who should plan, finance, implement and operate, and other related automobile parking questions are of critical concern to both public and private decision makers. Answers to these questions are influenced by community policy objectives for economic development and urban mobility, as well as continuing efforts to improve air quality and conserve energy." He goes on to recap traditional supply provision public parking policies and indicate some of the perceived reasons for changing those policies to meet changing community objectives. Considering parking policy to be one of adjusting the supply and demand of the parking market to meet those objectives, Smith lists various policies extant at the time of the article.

Policies to Reduce or Control Parking Supply - these include minimum or maximum parking requirements in zoning regulations; setting ceilings on total parking supply in an area; parking "freezes" or setting parking supply in an area at the quantity available at the time of the "freeze"; restricting or ending construction of principal-use or stand-alone parking facilities in an area; offering developers the option of making cash payments to public agencies, which they use the money to provide public parking facilities in the development locale; allowing developers to reduce parking supply in exchange for developer provided alternative mode incentives.

New Parking Pricing Policies - to encourage short-term parking through meter and rate adjustments; residential parking permits to restrict commuter parking in CBD residential areas; preferential pricing for carpools and vanpools to encourage ridesharing; increasing public facility prices that were below local market rates to increase revenues (including parking taxes); increasing parking violation enforcement and adjudication.

Changing Parking Demands - adjusting parking requirements to accurately reflect parking demand for changed land use or for changed user patterns at existing land uses; changing minimum parking requirements and allowing special considerations for transit proximity or rideshare program development; reductions in parking requirements at mixed-use developments.

Additionally, the author addressed the influence of smaller cars on physical parking space size and on small car/large car mix ratios; escalating development and construction costs (in the early 1980s); increases in operating expenses; restrictions on public and private sector funding for parking facilities; and the feasibility of public-private ventures and the use of federal grants from various sources for these ventures.

Smith concludes that public parking policy depends on awareness of changing influences that affect parking demand, flexibility while adopting more restrictive parking policies, recognition of the impacts of changes in parking policies, and customization of policies to local objectives. He states that the "...potentially significant and highly localized nature of the impacts associated with many parking policy changes makes it extremely important that planning encourage the input of all concerned interests, and that current and accurate data be used. Possible institutional conflicts should be recognized and accounted for in the planning, implementation and operation of new parking controls. Implementation of new parking policies should be coordinated with other aspects of the transportation system, including the parking enforcement program. Most importantly, new or changed parking policies should be tailored to the needs of the individual community."

Swanson, Wayne. "Parking: How Much Is Enough?" *Planning* Vol.55, no.7 (July 1989) pp.14-17

Parking's Use as a Governmental Control for Land Use and Zoning.

This article provides as a focus point the need for flexibility and adaptability in parking zoning regulations that can be based on specific needs, cooperative outlooks, and situational monitoring. Swanson succinctly leads off this work with, "...car sizes, traffic patterns, and parking needs are changing rapidly, [while] the parking sections of zoning ordinances tend to stay the same. New standards are often copied blindly from other locales. Even worse, the standards used may be based on the old-fashioned assumption that demand is paramount. In contrast, many parking experts now say that communities should use parking standards to limit automobile trips, not encourage them." Swanson cites Bob Owens, senior transportation engineering specialist for 3M, regarding a 3M research and development facility in Austin, Texas, where "...going by the book...would have required the company to provide almost two parking spaces per employee", based on local zoning requirements establishing parking space requirements on a per 1,000 square feet basis. Such inappropriate requirements may be overcome but that requires variances, hearings, studies, reports, counter-studies, lawyers, time, and money. Owens suggests that it is much more efficient and cooperative for cities to give their professional planning staff members leeway in interpreting ordinances and technical requirements. When employers must try to tell administrators that they want less parking than zoning ordinances call for because the employer wants to institute an aggressive ridesharing plan, and then must go before councils to request variances in order to do so, eventually some employers decide that such innovations are simply not worth the effort.

How Much Parking is Enough?

Swanson indicates that some jurisdictions are adding maximums to existing minimum requirements in attempts to alleviate pollution, mitigate congestion and encourage transit ridership. Areas that must cope with overuse of, and overdependence on, the automobile (Texas, California, and Florida, specifically) must be at the cutting edge of innovative parking ordinance implementation. The article cites two leaders in this process: San Diego, California's Mobility Planning Program manages transit development, traffic control, transportation demand management, and parking policy; and Montgomery County, Maryland, which uses parking to

influence other integrated transportation policies. San Diego has adopted some innovative zoning ordinances and is preparing others, additionally it has applied for an Urban Mass Transportation Administration grant to develop a comprehensive parking/transportation plan. Swanson cites Parking Generation (ITE, 1987) as the basis for the development of flexible, innovative, and cooperative parking policies. Swanson's article should be required reading for planners, parking administrators, elected officials, developers, lenders, and employers.

As an example of how parking requirements vary across the country Swanson includes the following instances as a warning to areas that may wish to simply copy others:

Factory	Bellevue, WA - 1.5 per 1,000 net square feet floor area St. Louis County, MO - 2 per each 3 employees on the maximum shift plus 1 for each company vehicle Vista, CA - 1 per 750 square feet of gross floor area
Bank	Carroll County, MD - 1 per 150 square feet floor area, plus 1 per employee Provo, UT - 1 per 300 square feet gross floor area Riverside, CA - 1 per 180 square feet gross floor area
Church	Ames, IA - 1 per 8 persons seating capacity, or 1 per 120 square feet floor area in main worship area Arlington, VA - 1 per 5 seats Troy, MI - 1 per each 3 seats or 6 feet of pews
Hospital	National City, CA - 1 per 3 beds and 1 per 3 permanent employees Pleasanton, CA - 2 per each bed and 1 for each employee and staff doctor Montgomery County, OH - 1 per each bed plus 1 per each 2 employees on the combined major work shifts
Theater	Provo, UT - 1 per 6 permanent seats, up to 800 seats, plus 1 per 8 seats over 800 St. Louis County, MO - 1 per each 4 seats or 1 per each 50 square feet

Parking's Purpose in Local Government Revenue Generation.

The City of Portland lies in a valley at the confluence of the Willamette and Columbia rivers and faced a future of poor ambient air quality by the early 1970s. In 1975, Portland's Downtown Parking and Circulation Policy (DPCP) was approved by both the Oregon Department of Environmental Quality and the U.S. EPA as a strategy for managing carbon monoxide emissions from motor vehicles in the metropolitan Portland area. The basic premise of the program was a "parking cap", that is, a limit on the total number of parking spaces in the central business district; allowing a maximum number of parking spaces in new developments rather than requiring a minimum number; and restrictions on surface lots. Other segments of the policy included: carpool incentives; parks and residential area parking permits; management of rates at city-operated garages and on- and off-street meters to encourage turnover; and, "...the essential ingredient, high quality and standards in parking patrol enforcement."

Continued economic growth created the need to address the effectiveness of the parking cap and Portland investigated the implementation of a parking tax. As part of this process TRI-MET reviewed the overall effects of parking taxes in a number of jurisdictions. Of the jurisdictions reviewed, nine supplied actual or estimated revenues:

<u>Jurisdiction</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
City of Los Angeles, CA			\$40m (est)	\$40.4m (est)
City of San Francisco, CA	\$22.8m	\$22.85m	\$22.87m	na
City of Toronto, Ont		Cdn\$110m	Cdn\$110m	Cdn\$113m (est)
Montgomery County, MD	\$54m (est)*			
City of Chicago, IL			\$34.3m	
City of Newark, NJ		\$ 7.1m	\$ 6.9m	
City of New York, NY		\$84.3m	\$81.5m	
City of Philadelphia, PA	\$18.1m	\$20.3m		
City of Pittsburgh, PA			\$18m	

Parking taxes are not a new concept. Newark has had theirs since 1971, New York City since 1975, and Philadelphia since 1937! In March, 1990, the Washington State Legislature passed senate Bill 6358, enabling local jurisdictions to impose a commercial parking tax. The goals of this "Local Option Commercial Parking tax" were to discourage drive-alone commuting (the SOV), and to generate revenue for transportation purposes.

* This was the estimated annual revenue projected for the parking tax proposal which was defeated in 1988. See McGarry, Robert S. "Proposed Parking Tax for Montgomery County, Maryland" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990).

Ulberg, Cy. "Parking Tax Discussion Paper" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Parking's Purpose in Local Government Revenue Generation.

The issue of the parking tax is one that can create political problems for its proponents if not approached in a cautious manner. Nevertheless by the time of the symposium, Baltimore, Chicago, Los Angeles, New York, Pittsburgh, San Francisco, and Washington, DC had all implemented parking taxes in some form. Ulberg's paper is a detailed overview of the issues surrounding this subject.

According to Ulberg, parking taxes may be implemented in several ways:

1. Imposed on the parking provider or directly on the parking user.
2. Applied to all parkers or specific parking user groups.
3. Imposed jurisdiction-wide or in specific geographic areas.
4. Collected directly from parkers; or indirectly through lot operators or employers.
5. Charged as a fixed fee or as a proportion of parking user cost.
6. Charged as an annual fee or applied only to certain times of the day or days of the week.

Along with a variety of implementation methods, parking tax revenues may be put to a number of uses:

1. Revenues may simply add to general funding sources.
2. Revenue may be directed to a general transportation funding program, however this program may simply be a provider of more streets, highways, or parking

facilities which may be counterproductive to traffic demand management philosophies.

3. Revenues may be allocated to TDM measures such as transit subsidies, ridesharing programs, etc.

Ulberg argues that the revenue generation potential of a parking tax is greatest when applied jurisdiction-wide and on all parking and parking users. As an example he uses a King County (Seattle area), Washington (population *ca.* 1.5 million) study which estimated that "...a tax of 50 cents per day paid for all off-street parking used by peak hour commuters would generate almost \$100 million a year." Overall revenue potential must be estimated on a case by case basis.

Parking Management Strategies as an Option to Alleviate Traffic Congestion.

Ulberg also addresses the use of a parking tax as a transportation demand management tool. He indicates that "...by raising the cost of parking, jurisdictions will encourage automobile drivers to switch to other modes of travel, or to travel less where and when a parking tax applies. The degree of change that a parking tax engenders can be debated. However, the transportation demand management impact of a parking tax can be targeted to particular groups whose travel behavior is most critical to change." Ulberg cautions that targeting particular populations (i.e. peak hour CBD commuters only) may not only result in less gross revenue than a broader targeted population, but that administrative cost factors may result in a decrease in net revenue percentages. He argues, however, that "...travel behavior will change significantly only if a fairly sizable tax is applied to a broad range of parkers." Also Ulberg suggests that how and where indirect parking taxes are passed on to the parking user has a particularly problematic effect on TDM measures. He states that "...which persons or entities should incur a parking tax is a critical issue if transportation demand management is a primary goal of implementing the tax. If individual parkers incur the tax, it will encourage individual mode shift. If entities such as parking operators, employers or merchants incur the tax, the impact on individual mode shift will depend on the extent to which the tax is passed on." That is, while parking operators most likely will pass the tax on directly to parking users, they may instead choose to simply change their rate structures in response and affect the market in ways not compatible with the goals of the parking tax policy. Additionally, employers or merchants who must pay a tax on the provision of parking

spaces may pass that cost on to employees (by lowering salaries) or customers (by raising prices) resulting in a null effect on parking user behavior.

He suggests that a direct parking tax on parking users has the greatest possibility of affecting individual parking user behavior, and that "...even if the tax is collected by a parking operator or an employer, mechanisms need to be developed to ensure that the parker pays the cost, or at least is aware of it. Ulberg argues for differentiated parking taxes, that is, different rates for different geographic locations and/or different times. When the tax is charged as a percentage of existing parking fees "...the effect is to charge a greater tax in areas of greatest congestion..." and that "...places that already have high parking costs will support modal shift to high occupancy modes." Ulberg suggests that differential parking taxes "...is especially important in implementing a tax on parking where no specific cost can be ascertained. For instance, if a parking tax were to be applied on all employer-provided parking, even if the parking spaces were owned by the employer, the fee could be specified without having determinate information about the value of the parking."

Ulberg lists three types of parking taxes:

1. An ad valorem tax charged as a percentage of parking fees.
2. A temporal tax based on the number of hours parked.
3. A fixed fee when only long-term parking is to be taxed.

He also suggests four targeting options:

1. A long-term parking tax.
2. A peak hour parking tax.
3. A tax on all parkers with short-term parking rebates.
4. An employer-based parking tax.

Valk, Peter J. "Leasing Practices and Parking" from Proceedings of the Commuter Parking Symposium (Seattle, WA: Municipality of Metropolitan Seattle, 6-7 December 1990)

Parking's Role in Development Financing.

Valk's paper addresses how existing patterns of development leasing and property management behavior affect parking policies aimed at reducing parking user demand. He states that public policy-directed transportation demand management strategies that discourage SOV travel for commuters will not be effective "...until changes occur in the development and leasing marketplace, along with demonstrable changes in tenant parking needs." He argues that lending institutions spell out parking requirements above the local zoning minimums because these institutions "...seek to preserve the attractiveness of property over time...", and in many cases, the opportunity to reduce parking supply through TDM measures is avoided. Despite studies (Gruen and Gruen, 1986) which show that nearly half (53 percent) of the parking supply at a variety of well-leased east and west coast business parks went unused, and that parking revenues associated with office buildings "...does not yield the return on investment required to cover the debt service on the facilities...", Valk indicates that lenders are reluctant to reduce parking supply in new developments. The circular argument of lenders - that until they are shown empirical evidence of reductions in parking user demand, they will continue to oversupply the market - creates difficulties for parking policy reform efforts. The author presents some possible areas for modification of lender behavior regarding parking supply provision.

First, TDM strategies in projects that have multiple phases may prove successful in reducing overall project parking demand. That is, if Stage One of a project is built with lender-driven parking oversupply, TDM measures may be shown to be effective in reducing parking user demand to such a degree that successive stages may be constructed with reduced amounts of parking.

Second, the economic argument for eliminating the practice of commingling or hiding tenant costs of parking in leasing agreements. Valk indicates that tenants seek to minimize costs and owners try to get as much income as they can, thus owners hide the actual tenant cost of parking. Tenants continue to supply "free" parking to their employees even though the employer is actually paying for parking spaces that may go unused. Because the cost to the tenant is hidden, employers have no incentive to either charge employees for parking or adopt TDM measures such

as carpools or vanpools. According to Valk, the commingling practice "...works against persuading tenants to reduce the amount of parking they lease. Separating the costs would present employers with the opportunity to see just how much parking costs them and furnish a more rational basis for determining how much is to be spent on parking and [how much] on lower-cost incentives to employees to reduce parking demand, thus lowering monthly operating costs. This strategy only works in circumstances where tenants are free to choose the amount of parking they need rather than being required to take a fixed amount as dictated by the terms of their lease."

Third, the focus of property managers is on generating income by maintaining (or increasing) monthly revenues, as managers often are paid on a percentage of a facilities revenues. This arrangement works against adopting incentive measures to reduce parking demand. Valk, suggests rewriting property management agreements to create a more flexible parking market within a facility. In CBD locations, often the free parking that a tenant pays for in the lease is reserved for executives or upper management, while line employees must pay for parking in public or private off-street facilities. Tenants that set aside spaces for carpools - and then charge for parking - would recoup at least part of their hidden parking costs.

Fourth, lenders seek maximum return on their investment and developers that break out parking and separately charge for parking supply could show lenders additional revenue, generation. Additionally, as more (and more effective) TDM measures are adopted by municipalities, lenders may be faced with facilities that have a visible oversupply of costly but unproductive parking. The circularity of the lender argument may well be broken by market forces driven by public policy. When that occurs, lenders will adopt smaller rules of thumb regarding parking supply because properties with too much such parking could end up with high operating costs and find themselves in an uncompetitive position with buildings that included parking management strategies and were constructed with fewer spaces, carpool and vanpool provisions, and/or built-in pedestrian and transit accessibility.

Valk suggests six actions for the development community to undertake:

1. Close examination of development practices and financing techniques.
2. Comparative analysis of the economic consequences of lender rule of thumb requirements versus local agency TDM measures.
3. A review of owner-management and landlord-tenant relationships to create opportunities for recognizing incentive possibilities in modified parking practices.
4. Identification of potential amendments to standard lease agreements to incorporate parking management measures.
5. Identification of marketable tenant attracting building features that incorporate non-automobile directed transportation amenities to improve accessibility.
6. Analysis of the effects of TDM and TRO programs on tenant parking needs.

Washington State Transportation Center (TRAC). "Parking Policy Reform: A White Paper" (Draft) prepared for the Commuter Parking Symposium; Seattle, Washington: December 6-7, 1990

Parking's Role in Encouraging SOV Travel.

By putting the basic concept of "free" parking in a unique historical perspective this "white paper" set the tone for the 1990 Parking Symposium. The paper suggests that the expectation of free parking for shoppers and commuters "...dates back to the horse and buggy days. Even before automobiles existed, shop owners provided hitching posts and places to leave horses and wagons near their shops. If space was inadequate in the street in front of the shops, separate parcels of land were set aside for parking. Often the city provided the land and picked up the manure that inevitably accumulated." So things have not really changed all that much.

The paper also brings up equity issues in parking policy. While free parking is considered as a fringe benefit for most employees, the subsidy of this free parking by the employer is a monetary bias exclusively in favor of those who commute by car, distinguishing this one benefit from others like health care, vacations, and retirement, which (subsidized or un-subsidized) are at least generally offered to all employees. The paper states, "In some organizations, the inequity is even greater because parking is often only available to upper management. Lower level employees who wish to commute by car have to pay for the parking themselves."

The subsequent parking symposium was to focus on six areas of potential for parking policy reform:

1. The implications of federal tax policy which encouraged automobile commuting by treating employer-paid parking as a tax-exempt employee benefit.
2. The potential of local parking taxes to:
 - a. raise the cost of parking, affecting commuter mode choices;
 - b. generate revenue for transportation purposes;
 - c. discourage the employer provision of subsidized parking.

3. Policy influences on the supply and demand relationship and the influence of price on demand behavior.
4. Understanding of the developer leasing practices that influence tenant parking decisions.
5. Local jurisdiction zoning practices' influence on parking supply; and
6. Policy programs that influence employer parking pricing decisions and employer commuter mode split determinations.

The stated objectives of the symposium were to be: generation of new research activity, initiation of demonstration projects, and development of new policy initiatives that would all modify parking provision policies and have a positive effect on the transportation system.

Willson, Richard W. Suburban Parking Economics and Policy: Case Studies of Office Worksites in Southern California (Washington, DC: US Department of Transportation, September 1992)

Parking's Role in Development Attractiveness.

Willson conducted case studies of ten suburban office worksites in Southern California, combining parking utilization studies, cost analysis, and interviews with various actors involved. He looked at these sites to answer four significant questions: (1) What percentage of parking spaces were actually in use during peak periods?; (2) What is the true cost of providing "free" parking for employees?; (3) What factors contribute to excess parking supplies at typical sites?; and (4) How does "free" parking encourage SOV usage? While suburban parking availability may not be an issue in Dade County, parking ratio zoning policies for suburban sites may aid in increasing transit ridership shares in the growing intrasuburban (suburb-to-suburb) commuting area. The study showed that the "rule of thumb" of 4 spaces per 1,000 square feet of office space resulted in an average peak parking utilization of 51 percent. That is, nearly half of the parking spaces deemed necessary by "the market" were not being used, even at peak times. Economics can speak to this "market" in figures that developers may understand better than public policy statements. Willson's economic analysis showed that the adjusted break-even (but hidden) utilization cost of a developer-provided "free" parking space turned out to be \$109 per month, based on land, construction, maintenance and other costs.

The study presents six policy options with the caveat that convincing the various actors of both the need for and benefits in parking reform can only be accomplished through a concerted education program and consistent public parking policy implementation. His recommendations for local governments include as one option the elimination of minimum parking requirements and then letting the "market" determine supply. If minimums are seen as a necessity, then five factors must be accounted for: (1) parking demand at a price that reflects the full cost of parking; (2) specific office use characteristics; (3) the characteristics of surrounding land uses; (4) spatial relationships to transportation systems; and (5) employee density. Willson also recommends programs to educate developers regarding their own careful economic assessment of actual parking costs and needs, their opportunities for shared parking, ongoing transit programs (including TDMs and TMAs), and cooperative efforts at adjusting the status quo. Additionally, Willson sees a need for public transit operators to expand their efforts to influence parking policy in the city planning and development approval process to encourage reductions in parking

supplies, transit-friendly design, and transit support in general. Willson concludes that parking has been a largely invisible issue, "free" parking has been taken for granted for too long, and that allowing the status quo to continue will result in continued waste of ever more valuable land, air, and petroleum resources.

Appendix B

Parking Regulations

APPENDIX B

Abstracts of Parking Related State Statutes; County and Municipal Zoning Ordinances Regarding Off-Street Parking

Appendix B-1: State Statutes

Title XI County Organization and Intergovernmental Relations
Chapter 125 County Government
Section 125.01
Powers and duties.-

(1) The legislative and governing body of a county shall have the power to carry on county government. To the extent not inconsistent with general or special law, this power includes, but is not restricted to, the power to:

(l) Provide and operate air, water, rail, and bus terminals; port facilities; and public transportation systems.

(m) Provide and regulate arterial, toll, and other roads, bridges, tunnels, and related facilities;...provide and regulate **parking facilities**; and develop and enforce plans for the control of traffic and **parking**. Revenues derived from the operation of toll roads, bridges, tunnels, and related facilities may, after provision has been made for the payment of operation and maintenance expenses of such toll facilities and any debt service on indebtedness incurred with respect thereto, be utilized for the payment of costs related to any other transportation facilities within the county, including the purchase of rights-of-way; the construction, reconstruction, operation, maintenance, and repair of such transportation facilities; and the payment of indebtedness incurred with respect to such transportation facilities.

...(p) Enter into agreements with other governmental agencies within or outside the boundaries of the county for joint performance, or performance by one unit in behalf of the other, of any of either agency's authorized functions.

...(q) Establish, and subsequently merge or abolish those created hereunder, municipal service taxing or benefit units for any part or all of the unincorporated area of the county, within which there may be provided...streets,...transportation,...and other essential services from funds derived from service charges, special assessments, or taxes within such unit only. Subject to the consent by ordinance of the governing body of the affected municipality given either annually or for a term of years, the boundaries of a municipal service taxing or benefit unit may include all or part of the boundaries of a municipality in addition to all or part of the unincorporated areas.

- ...(2) The board of county commissioners shall be the governing body of any municipal service taxing or benefit unit created pursuant to paragraph (1)(q).
- ...(3) (a) The enumeration of powers herein shall not be deemed exclusive or restrictive, but shall be deemed to incorporate all implied powers necessary or incident to carrying out such powers enumerated, including, specifically, authority to employ personnel, expend funds, enter into contractual obligations, and purchase or lease and sell or exchange real or personal property.
- (b) The provisions of this section shall be liberally construed in order to effectively carry out the purpose of this section and to secure for the counties the broad exercise of home rule powers authorized by the State Constitution.
- ...(5) (a) To an extent not inconsistent with general or special law, the governing body of a county shall have the power to establish, and subsequently merge or abolish those created hereunder, special districts to include both incorporated and unincorporated areas subject to the approval of the governing body of the incorporated area affected, within which may be provided municipal services and facilities from funds derived from service charges, special assessments, or taxes within such district only. Such ordinance may be subsequently amended by the same procedure as the original enactment.
- (c) It is declared to be the intent of the Legislature that this subsection is the authorization for the levy by a special district of any millage designated in the ordinance creating such a special district or amendment thereto and approved by vote of the electors under the authority of the first sentence of s.9(b), Art.VII of the State Constitution. It is the further intent of the Legislature that a special district created under this subsection include both unincorporated and incorporated areas of a county and that such special district may not be used to provide services in the unincorporated area only.
- ...(6) (a) The governing body of a municipality or municipalities by resolution, or the citizens of a municipality or county by petition of 10 percent of the qualified electors in each unit, may identify a service or program rendered specially for the benefit of the property or residents in unincorporated areas and financed by countywide revenues and petition the board of county commissioners to develop an appropriate mechanism to finance such activity for the ensuing fiscal year, which may be by taxes, special assessments, or service charges levied or imposed solely upon the residents or property in the unincorporated area, by the establishment of a municipal service taxing or benefit unit pursuant to paragraph (1)(q), or by remitting the identified cost of service paid from revenues required to be expended on a countywide basis to the municipality or municipalities, within 6 months of the adoption of the county budget, in the proportion that the amount of county ad valorem taxes residents of the unincorporated area.

Section 125.0101

County may contract to provide services to municipalities and special districts.-

- ...(2) In addition to the powers enumerated in this chapter, the legislative and governing body of a county shall have the power to contract with a municipality or special district within the county for...streets,...transportation, and other essential facilities... . Such services shall be funded as agreed upon between the county and the municipality or special district.

Section 125.011

Definitions:

- ...(2) "Project" includes any one or any combination of two or more of the following:
 - (a) Public mass transportation... .

Section 125.012

Project facilities; general powers and duties.-

- (1) To construct, acquire, establish, improve, extend, enlarge, reconstruct, equip, maintain, repair, and operate any project as defined in s.125.011, either within or without the territorial boundaries of the county.

Chapter 159 Bond Financing
Section 159.01 "Revenue Bond Act of 1953"
Section 159.02
Definitions:

- ...(4) The word "project" shall include all property, rights, easements, and franchises relating thereto and deemed necessary or convenient for the construction or acquisition or the operation thereof, and shall embrace...mass transportation systems, expressways,...[and] **parking facilities**.
- ...(19) The term "mass transportation system" shall mean any system for the transportation of the public by bus, rail or any means of conveyance serving the general public and moving over prescribed routes.
- ...(25) The term "**parking facilities**" shall mean any facility constructed for the purpose of vehicular parking and the use, operation and occupancy of such **parking facilities** and for which charges are made.

Section 159.08
Revenue bonds.-

- (1) The governing body of any unit shall have the power and it is hereby authorized to provide by ordinance or resolution, at one time or from time to time, for the issuance of revenue bonds of the unit for the purpose of paying all or part of the cost as hereinabove defined of any one or more self-liquidating projects...or of any improvements thereof.
- (2) The proceeds of such bonds shall be used solely for the payment of the cost of the project... .

Section 159.25 Florida Industrial Development Financing Act
Section 159.27
Definitions:

- ...(5) "Project" means any capital project comprising...an **urban parking facility**,...or a mass commuting facility, including one or more buildings and other structures, whether or not on the same site or sites; any rehabilitation, improvement, renovation, or enlargement of, or any addition to, any buildings or structures for use as...an **urban parking facility**,...or a mass commuting facility,...or other facilities for or used in conjunction with...an **urban parking facility**, or a mass commuting facility; and including also the sites thereof and other rights in land therefor whether improved or unimproved,...and all appurtenances and facilities incidental thereto, such as...**parking facilities**,...and other improvements necessary or convenient for any...**urban parking facility**,...or a mass commuting facility and any one or more combinations of the foregoing.
- ...(14) "**Urban parking facilities**" means property used or useful in connection with eliminating traffic congestion and urban blight, improving access and egress, and providing for development or redevelopment of central cities.
- ...(23) "**Mass commuting facility**" has the same meaning as in s.103(b)(4) of the Internal Revenue Code of 1954, as amended, and the regulations issued thereunder.

Section 159.28
General powers.-

Every local agency shall have all of the powers necessary or convenient to carry out and effectuate the purposes and provisions of this part...with respect to any project or projects:

- ...(4) To acquire by purchase, lease, gift, or otherwise,...for the construction, operation, or maintenance of any project;
- ...(6) To pledge or assign any money, rents, charges, fees, or other revenues and any proceeds...;
- (7) To issue revenue bonds of the local agency for the purpose of providing funds to pay all or any part of the costs of any project,...;
- (8) To construct, acquire, own, repair, maintain,...and equip projects and to pay all or any part of the costs thereof from the proceeds of bonds of the local agency or from...other funds made available to the local agency for such purpose;
- (9) To fix, charge, and collect rents, fees, and charges for the use of any project;...

Section 159.43
Liberal construction.-

Part II of Chapter 159 ["Florida Industrial Development Financing Act"], being necessary for the prosperity and welfare of the state and its inhabitants, shall be liberally construed to effect the purposes thereof; shall be, and be deemed, authority in addition to, and shall provide alternative methods for, any other authority provided by law for the same or similar purposes; and is supplemental to and not in derogation of any powers of any local agency otherwise conferred. The criteria and requirements of this part are applicable only to projects financed under authority of this part, except as otherwise expressly incorporated by references in other provisions of law.

Chapter 161	Beach and Shore Preservation
Part I	Regulation of Construction, Reconstruction, and Other Physical Activity
Section 161.011	"Beach and Shore Preservation Act"
Section 161.021	

Definitions:

- ...(11) "Local government" means a county, municipality, community development district, or independent special taxing district.

Section 161.091

Beach management trust fund.-

- (1) There is created in the State Treasury an account to be known as the "Beach Management Trust Fund".

Section 161.101

State and local participation in authorized projects and studies relating to beach management and erosion control.-

- (1)... the Legislature declares that the state, through the Department of Natural Resources,...may authorize the expenditure from the Beach Management Trust Fund of the amount necessary to pay up to 75 percent of the actual costs... . The local government in which the beach is located shall be responsible for the balance of such costs.
- (2) To carry out the beach and shore preservation programs, the department is hereby constituted as the beach and shore preservation authority for the state.
- ...(8) With regard to a project approved in accordance with s.161.161, the department is authorized to pay from the Beach Management Trust Fund an amount up to 75 percent of the actual costs of the approved project, including, but not limited to, the costs for:
 - (f) Construction easements, rights-of-way, public access easements, and **vehicle parking spaces**;

Section 161.161

Procedure for approval of projects.-

- ...(2) In establishing the recommended list of restoration and renourishment projects described in subsection (1), the division shall consider and balance the following criteria:
 - ...(h) The degree of public access to the beach, including **adequate vehicle parking** or consolidated public access points, taking into account existing access points and local public access needs;
 - (i) The extent of public support for the project;... .

PART III COASTAL ZONE PROTECTION
Section 161.52 "Coastal Zone Protection Act of 1985"
Section 161.54
Definitions:

- ...(6) (a) "Major structure" means houses, mobile homes, apartment buildings, condominiums, motels, hotels, restaurants, towers, other types of residential, commercial, or public buildings, and other construction having the potential for substantial impact on coastal zones.
- (b) "Minor structure" means...sidewalks, driveways, **parking areas**,...and other uncovered paved areas;... . It shall be a characteristic of minor structures that they are considered to be expendable under design wind, wave, and storm forces.
- (c) "Nonhabitable major structure" means...**parking garages**;...roads, bridges, streets, and highways;... .

Section 161.55
Requirements for activities or construction within the coastal building zone.-

- ...(3) STRUCTURAL REQUIREMENTS: NONHABITABLE MAJOR STRUCTURES.- Nonhabitable major structures need not meet specific structural requirements...except for the requirements of paragraph [(1)](c) [compliance with National Flood Insurance Program regulations as found in 44 C.F.R. Parts 59 and 60 or the local flood damage prevention ordinance, whichever is more restrictive.] and except for applicable provisions of the state minimum building code in effect in the jurisdiction. Such structures shall be designed to produce the minimum adverse impact on the beach and dune system and shall comply with any applicable state and local standards not found in this section.

Chapter 163 Intergovernmental Programs
Part II County and Municipal Planning and Land Development Regulation
Section 163.3161 "Local Government Comprehensive Planning and Land Development Regulation Act"

- ...(3) It is the intent of this act that its adoption is necessary so that local governments can preserve and enhance present advantages; encourage the most appropriate use of land...consistent with the public interest;...and deal effectively with future problems that may result from the use and development of land within their jurisdictions. Through the process of comprehensive planning, it is intended that units of local government can...facilitate the adequate and efficient provision of transportation,...and other requirements and services;... (4) It is the intent of this

act to encourage and assure cooperation between and among municipalities and counties and to encourage and assure coordination of planning and development activities of units of local government with the planning activities of regional agencies and state government in accord with applicable provisions of law.

- ...(8) It is the intent of the Legislature that the repeal of [s.163.160-163.315] shall not be interpreted to limit or restrict the powers of municipal or county officials, but shall be interpreted as a recognition of their broad statutory and constitutional powers to plan for and regulate the use of land... .

Section 163.3164

Definitions:

- ...(2) "Area" or "area of jurisdiction" means the total area qualifying under the provisions of this act, whether this be...all unincorporated lands within a county, or areas comprising combinations of the lands in incorporated municipalities and unincorporated areas of counties.
- ...(24) "Public facilities" means major capital improvements, including,...transportation,...
- ...(28) "Projects that promote public transportation" means projects that directly affect the provisions of public transit... .

Section 163.3171

Areas of authority under this act.-

- ...(2) A county shall exercise authority under this act for the total unincorporated area under its jurisdiction or in such unincorporated areas as are not included in any joint agreement with municipalities... . In the case of chartered counties, the county may exercise such authority over municipalities or districts within its boundaries as is provided for in its charter.

Section 163.3177

Required and optional elements of comprehensive plan; studies and surveys

- ...(6) In addition to the requirements of subsections (1)-(5), the comprehensive plan shall include the following elements:
- ...(b) A traffic circulation element consisting of the types, locations, and extent of existing and proposed major thoroughfares and transportation routes, including bicycle and pedestrian ways.

- ...(j) For each unit of local government within an urbanized area designated for purposes of s.339.175, a transportation element, which shall be prepared and adopted in lieu of the requirements of paragraph (b) and paragraphs (7)(a), (b), (c), and (d) and which shall address the following issues:

.. 3. **Parking facilities.**

- ...(7) The comprehensive plan may include the following additional elements, or portions or phases thereof:
 - (a) As a part of the circulation element of paragraph (6)(b) or as a separate element, a mass-transit element showing proposed methods for the moving of people,...related facilities, and fiscal considerations for the accomplishment of the element.
 - (d) As a part of the circulation element of paragraph (6)(b) or as a separate element, a plan element for the development of **offstreet parking facilities for motor vehicles** and the fiscal considerations for the accomplishment of the element.
- ...(11) (a) The Legislature recognizes the need for innovative planning and development strategies which will address the anticipated demands of continued urbanization of Florida's coastal...areas... . The Legislature further recognizes the substantial advantages of innovative approaches to development which may better serve to...provide for the cost-efficient delivery of public facilities and services.
- (b) It is the intent of the Legislature that the local government comprehensive plans and amendments adopted pursuant to the provisions of this part provide for a planning process which allows for land use efficiencies within urban areas and which also allows...the application of innovative and flexible planning and development strategies and creative land use planning techniques, which may include...urban villages, new towns, satellite communities, area-based allocations, clustering and open space provisions, mixed-use development, and sector planning.
- (c) It is the further intent of the Legislature that local government comprehensive plans and implementing land development regulations shall provide strategies which maximize the use of existing facilities and services through redevelopment, urban infill development, and other strategies for urban revitalization.

Section 163.3180

Concurrency.-

- (1) Roads...and mass transit, where applicable, are the only public facilities and services subject to the concurrency requirements on a statewide basis without appropriate study and approval by the Legislature; however, any local government may extend the concurrency requirement so that it applies to additional public facilities within its jurisdiction.

Section 163.3202

Land development regulations

- ...(2) Local land development regulations shall contain specific and detailed provisions necessary or desirable to implement the adopted comprehensive plan and shall as a minimum:
 - (h) Ensure safe and convenient onsite traffic flow, considering needed **vehicle parking**.
- (3) This section shall be construed to encourage the use of innovative land development regulations which include provisions such as transfer of development rights, incentive and inclusionary zoning,...and performance zoning. These and all other such regulations shall be combined and compiled into a single land development code for the jurisdiction.

Section 163.330 "Community Redevelopment Act of 1969"

Section 163.335

Findings and declarations of necessity.-

- (1) It is hereby found and declared that there exist in counties and municipalities of the state slum and blighted areas which constitute a serious and growing menace...; that the existence of such areas...aggravates traffic problems, and substantially hampers the elimination of traffic hazards and the improvement of traffic facilities; and that the prevention and elimination of slums and blight is a matter of state policy and state concern.

Section 163.340

Definitions:

...(8) "Blighted area" means...:

- (a)... [provides common examples of various conditions which collectively would constitute a blighted area]...; or
- (b) An area in which there exists faulty or inadequate street layout; inadequate **parking facilities**; or roadways, bridges, or public transportation facilities incapable of handling the volume of traffic flow into or through the area, either at present or following proposed construction.

However, for the purposes of qualifying for the tax credits authorized in chapter 220, "blighted area" means an area described in paragraph (a).

...(17) "Area of operation" means, for a county, the area within the boundaries of the county, and for a municipality, the area within the corporate limits of the municipality.

Section 163.360

Community redevelopment plans.-

- (1) Community redevelopment in a community redevelopment area shall not be planned or initiated unless the governing body has, by resolution, determined such area to be a slum area...[or] a blighted area,...and designated such area as appropriate for community redevelopment.

...(7) If the community redevelopment area consists of an area of open land to be acquired by the county or the municipality, such area may not be so acquired unless:

...(b) In the event the area is to be developed for nonresidential uses, the governing body determines that:

1. Such nonresidential uses are necessary and appropriate to facilitate the proper growth and development of the community in accordance with sound planning standards and local community objectives; and
2. Acquisition may require the exercise of government action, as provided in this part, because of:

- ... d. Outmoded street patterns;
- e. Deterioration of site;
- f. Economic disuse;
- g. Unsuitable topography or faulty lot layouts;
- h. Lack of correlation of the area with other areas of a county or municipality by streets and modern traffic requirements; or
- i. Any combination of such factors or other conditions which retard development of the area.

Section 163.362

Contents of community redevelopment plan.-

Every community redevelopment plan shall:

- (1) Contain a legal description of the boundaries of the community redevelopment area and the reasons for establishing such boundaries shown in the plan.
- (2) Show by diagram and in general terms:
 - ...(d) Such property as is intended for use as public parks, recreation areas, streets, public utilities, and public improvements of any nature.
 - ...(4) Identify specifically and public funded capital projects to be undertaken within the community redevelopment area.

Section 163.370

Powers; counties and municipalities; community redevelopment agencies.

- (1) Every county and municipality shall have all the powers necessary or convenient to carry out and effectuate the purposes and provisions of this part, including the following powers...:
 - (c) To undertake and carry out community redevelopment and related activities within the community redevelopment area, which redevelopment may include:
- 3. Installation, construction, or reconstruction of streets,...that are constructed in

support of convention centers, including...**parking garages**,...and other improvements necessary for carrying out in the community redevelopment area the community redevelopment objectives of this part in accordance with the community redevelopment plan.

7. Acquisition of any other real property in the community redevelopment area when necessary...to provide land for needed public facilities.

Section 163.400

Cooperation by public bodies.-

- (1) For the purpose of aiding in the planning, undertaking, or carrying out of community redevelopment and related activities authorized by this part, any public body may, upon such terms, with or without consideration, as it may determine:
- (c) Do any and all things necessary to aid or cooperate in the planning or carrying out of a community redevelopment plan and related activities.
- (f) Cause public buildings and public facilities...or any other works which it is otherwise empowered to undertake to be furnished; furnish, dedicate, close, vacate, pave, install, grade, regrade, plan, or replan streets, roads, sidewalks, ways, or other places; plan or replan or zone or rezone any part of the public body or make exceptions from building regulations... .

Section 163.501 "Safe Neighborhoods Act"

Section 163.502

Safe neighborhoods; legislative findings and purpose.--

- (1) The Legislature hereby finds and declares that among the many causes of deterioration in the business and residential neighborhoods of the state are the following: ...fragmentation of land uses and **parking areas** necessitating frequent automobile movement, lack of separation of pedestrian areas from automobile traffic, and excessive noise levels from automobile traffic.
- (2) The Legislature further finds and declares that safe neighborhoods are the product of planning and implementation of appropriate environmental design concepts,...[and] land use recommendations... .
- ...(4) The Legislature, therefore, declares that the development, redevelopment, preservation, and revitalization of neighborhoods in this state, and all the purposes of this part, are public purposes for which public money may be borrowed, expended, loaned, and granted.

Section 163.513

Crime prevention through environmental design, environmental security, and defensible space functions of neighborhood improvement districts.--All boards of local governments,...shall:

- ...(2) Provide an analysis of crimes related to land use and environmental and physical conditions of the district, giving particular attention to factors which support or create opportunities for crime... . Any factor used to define or describe the conditions of the physical environment can serve as the basis of a crime-to-environment relationship. These factors include streets,...**parking and parking lots**,...traffic flow patterns... .
- ...(4) Formulate and maintain...short-range and long-range projects and plans which the crime-to-environment analysis...has determined are applicable and utilize crime prevention through environmental design, environmental security, and defensible space strategies and tactics which will improve...public facilities and amenities...

Section 163.516

Safe neighborhood improvement plans.-

- (1) A safe neighborhood improvement plan is mandated for all neighborhood improvement districts... .
- (2) Every safe neighborhood improvement plan shall show by diagram and by general explanation:
 - (a) Such property as is intended for use as public parks, recreation areas, streets, public utilities, and public improvements of any nature.
 - (b) Specific identification of any publicly funded capital improvement projects to be undertaken within the district.

Part V

Section 163.565

Section 163.566

Definitions:

Regional Transportation Authorities

"Regional Transportation Authority Law"

- ...(9) "Public transportation system" means, without limitation, a combination of real and personal property, structures, improvements, buildings, equipment, plants, **vehicle parking or other facilities**,...used or useful for the purposes of public transportation.

Title XII Municipalities
Chapter 170 Supplemental and Alternative Method of Making Local
Municipal Improvements
Section 170.01 Authority for providing improvements and levying and collecting
special assessments against property benefited [sic].-

(1) Any municipality of this state may, by its governing authority:

...(g) **Provide for offstreet parking facilities, parking garages, or similar facilities;**

...(j) Provide for the payment of all or any part of the costs of any such improvements by levying and collecting special assessments on the abutting, adjoining, contiguous, or other specially benefited [sic] property.

However, **offstreet parking facilities, parking garages, or other similar facilities** and mass transportation systems must be approved by vote of a majority of the affected property owners.

Section 170.15

Expenditure for improvements.-

The governing authority of any municipality may pay out of its general funds or out of any special fund that may be provided for that purpose such portion of the cost of any improvement as it may deem proper.

Title XIV Taxation and Finance
Chapter 192 Taxation: General Provisions
Section 192.001
Definitions.-

...the following definitions shall apply in the imposition of ad valorem taxes:

- (1) "Ad valorem tax" means a tax based upon the assessed value of property. The term "property tax" may be used interchangeably with the term "ad valorem tax."
- (7) "Governing body" means any board, commission, council, or individual acting as the executive head of a unit of local government.

Chapter 196 Exemption

Section 196.001

Property subject to taxation.-

Unless expressly exempted from taxation, the following property shall be subject to taxation in the manner provided by law:

- (1) All real and personal property in this state and all personal property belonging to persons residing in this state; and
- (2) All leasehold interests in property of the United States, of any state, or any political subdivision, municipality, agency, authority, or other public body corporate of the state.

Section 196.197

Additional provisions for exempting property used by hospitals, nursing homes, and homes for special services.-

In addition to criteria for granting exemptions for charitable use of property set forth in other sections of this chapter, hospitals, nursing homes, and homes for special services shall be exempt to the extent that they meet the following criteria:

- ...(2) In determining the extent of exemption to be granted to hospitals, nursing homes, and homes for special services, portions of the property leased as **parking lots or garages** operated by private enterprise shall not be deemed to be serving an exempt purpose and shall not be exempt from taxation.

Chapter 212 Tax on Sales, Use, and Other Transactions

Part I Tax on Sales or Use of Tangible Personal Property, Admissions, Rentals, and Services (ss.212.01-212.215)

Section 212.01 "Florida Revenue Act of 1949"

Section 212.02

Definitions.-

- (2) "Business" means any activity engaged in by any person...with the object of private or public gain, benefit, or advantage, either direct or indirect. ...[T]he term "business"...includes other charges for the sale or rental of tangible personal property, sales of services taxable under this part, sales of or charges of admission,...all leases or rentals of or licenses in **parking lots or garages for motor vehicles**...and made subject to a tax imposed by this chapter.... Any tax on such sales, charges, rentals, admissions, or other transactions made subject to the tax imposed by this chapter shall be collected by the state, county, municipality,

any political subdivision, agency, bureau, or department, or other state or local governmental instrumentality in the same manner as other dealers, unless specifically exempted by this chapter.

Section 212.03

Transient rentals tax; rate, procedure, enforcement, exemptions.-

- ...(6) It is the legislative intent that every person is engaging in a taxable privilege who leases or rents parking or storage spaces for motor vehicles in **parking lots or garages**... For the exercise of this privilege, a tax is hereby levied at the rate of 6 percent on the total rental charged.

Section 212.031

Lease or rental of or license in real property.-

- (1) (a) It is declared to be the legislative intent that every person is exercising a taxable privilege who engages in the business of renting, leasing, letting, or granting a license for the use of real property unless such property is:
3. Property subject to tax on **parking**, docking, or storage spaces under s.212.03(6).

Section 212.06

Sales, storage, use tax; collectible from dealers; "dealer" defined; dealers to collect from purchasers; legislative intent as to scope of tax.-

- (2) (j) The term "dealer" is further defined to mean any person who leases, or grants a license to use, occupy, or enter upon,...space or spaces in parking lots or garages for motor vehicles... The term "dealer" also means any person who has leased, occupied, or used or was entitled to use any...space or spaces in **parking lots or garages for motor vehicles**...and who cannot prove that the tax levied by this chapter has been paid to the vendor or lessor on any such transactions.

Section 212.07

Sales, storage, use tax; tax added to purchase price; dealer not to absorb; liability of purchasers who cannot prove payment of the tax; penalties; general exemptions.-

- (1) (a) The privilege tax herein levied measured by retail sales shall be collected by the dealers from the purchaser or consumer.

- (9) Any person who has...leased, occupied, or used or was entitled to use any real property, space or spaces in **parking lots or garages for motor vehicles**...and cannot prove that the tax levied by this chapter has been paid to his vendor, lessor, or other person is directly liable to the state for any tax, interest, or penalty due on any such taxable transactions.

Title XVIII Public Lands and Property
Chapter 255 Public Property and Publicly Owned Buildings
Section 255.31

Authority to the Division of Building Construction of the Department of Management Services [formerly the Department of General Services] to manage construction projects for state and local governments.-

- (3) The Division of Building Construction may, upon request, enter into contracts with municipalities...authorities...[and] other political subdivisions...under which the division may provide the project management, administration services, or assistance for the construction...of...**parking lots**... The contracts shall provide for payment of fees to the division.

Section 255.501 "Florida Building and Facilities Act"
Section 255.502
Definitions.-

...(8) "Facility" means buildings...real estate...and all storage and **parking facilities** related thereto...furnished and acquired pursuant to this act.

...(11) "Pool" means the Florida Facilities Pool created in s.255.505.

...(13) "Pool rental rate" means the per square foot rental rate established by the Division of Facilities Management for every facility which is in the pool.

Section 255.51
Determination of rental rates.-

The Division of Facilities Management shall determine and establish rental rates charged and computed on a per square foot basis for all facilities in the pool whether or not of new construction, and such rates shall be applied uniformly to all agencies using or occupying space in facilities in the pool with additional charges based upon the elements of service and special requests as provided. Separate rates and charges may be established for...**parking space** incidental to facilities in the pool.

Title XIX Public Business
Chapter 288 Commercial Development and Capital Improvements
Section 288.063
Contracts for transportation projects.-

- (1) The Division of Economic Development is authorized to make expenditures and enter into contracts for direct costs of transportation projects with the appropriate governmental body.
- ...(3) With respect to any contract executed pursuant to this section, the term "transportation project" means a transportation facility as defined in s.334.03(31) which is necessary in the judgement of the Division of Economic Development to facilitate the economic development and growth of the state

Title XXIII Motor Vehicles
Chapter 316 State Uniform Traffic control
Section 316.001 "Florida Uniform Traffic Control Law"
Section 316.002
Purpose.-

It is the legislative intent in the adoption of this chapter to make uniform traffic laws to apply throughout the state and its several counties and uniform traffic ordinances to apply to all municipalities. The Legislature recognizes that there are conditions which require municipalities to pass certain other traffic ordinances in regulation of municipal traffic that are not required to regulate the movement of traffic outside of such municipalities. Section 316.008 enumerates the area within which municipalities may control certain traffic movement or **parking** in their respective jurisdictions. This chapter shall be supplemental to the other laws or ordinances of this chapter and not in conflict with. It is unlawful for any local authority to pass or to attempt to enforce any ordinance in conflict with the provisions of this chapter.

Section 316.003
Definitions:

- (27) **PARK OR PARKING.-** The standing of a vehicle, whether occupied or not, otherwise than temporarily for the purpose of and while actually engaged in loading or unloading merchandise or passengers as may be permitted by law under this chapter.

Section 316.006

Jurisdiction.-

...(2) MUNICIPALITIES.--

- (a) Chartered municipalities shall have original jurisdiction over all streets and highways located within their boundaries, except state roads... .

(3) COUNTIES.--

- (a) Counties shall have original jurisdiction over all streets and highways located within their boundaries, except all state roads and those streets and highways specified in subsection (2)... .

Notwithstanding the provisions of subsection (2), each county shall have original jurisdiction to regulate **parking**, by resolution of the board of county commissioners and the erection of signs...in **parking areas** located on property owned or leased by the county, whether or not such areas are located within the boundaries of chartered municipalities.

Section 316.008

Powers of local authorities.-

- (1) The provisions of this chapter shall not be deemed to prevent local authorities, with respect to streets and highways under their jurisdiction and within the reasonable exercise of the police power, from:
 - (a) Regulating or prohibiting stopping, standing, or **parking**.

Section 316.194

Stopping, standing or **parking** outside of municipalities.-

- (1) Upon any highway outside of a municipality, no person shall stop, park, or leave standing and vehicle...upon the paved or main-traveled part of the highway when it is practicable to stop, park, or so leave the vehicle off such part of the highway...
- (2) This section shall not apply to the driver or owner of any vehicle which is disabled...in such manner and to such extent that it is impossible to avoid stopping and temporarily leaving the disabled vehicle in such position, or to passenger-carrying buses temporarily parked while loading or discharging passengers...

Section 316.1945

Stopping, standing, or **parking** prohibited in specified places.-

- (1) Except when necessary to avoid conflict with other traffic, or in compliance with law or the directions of a police officer or official traffic control device, no person shall:
 - (a) Stop, stand, or park a vehicle:

[Lists twelve circumstantial locations]
 - (b) Stand or park a vehicle...except momentarily to pick up or discharge a passenger or passengers:

[Lists seven circumstantial locations]
 - (c) Park a vehicle...except temporarily for the purpose of, and while actually engaged in, loading or unloading merchandise or passengers:
 1. Within 50 feet of the nearest rail of a railroad crossing...
 2. At any place where official signs prohibit parking.

Section 316.195

Additional **parking** regulations.-

- (1) Except as otherwise provided in this section, every vehicle stopped or parked upon a two-way roadway shall be so stopped or parked with the right-hand wheels parallel to and within 12 inches of the right-hand curb or edge of the roadway.
- (2) Except when otherwise provided by local ordinance, every vehicle stopped or parked upon a one-way roadway shall be so stopped or parked parallel to the curb or edge of the roadway, in the direction of authorized traffic movement, with its right-hand wheels within 12 inches of the right-hand curb or edge of the roadway, or its left-hand wheels within 12 inches of the left-hand curb or edge of the roadway.
- (3) Local authorities may, by ordinance, permit angle parking on any roadway, except that angle parking shall not be permitted on any state road unless the Department of Transportation has determined by resolution or order entered in its minutes that the roadway is of sufficient width to permit angle parking without interfering with the free movement of traffic.

Section 316.1951

Parking for certain purposes prohibited.-

Section 316.1955

Parking spaces provided by governmental agencies for certain disabled persons.-

- (1) Each state agency and political subdivision having jurisdiction over street parking or publicly owned and operated parking facilities shall provide a minimum number of specially designed and marked motor vehicle parking spaces for the exclusive use of those severely disabled individuals who have permanent mobility problems that substantially impair their ability to ambulate and who have been issued either an exemption parking permit...or license plate pursuant to [various statutes].
- (2) The following minimum number of such parking spaces shall be provided:
 - (a) One space in the immediate vicinity of a building which houses a governmental entity or a political subdivision, including, but not limited to, state office buildings and courthouses, if no parking for the public is provided on the premises of such building;
 - (b) One space for each 150 metered onstreet parking spaces;
 - (c) Publicly maintained and operated parking facilities intended for public use and not subject to paragraph (a) shall have the number of parking spaces for disabled persons as set forth in the following table; however, when parking spaces are leased at such publicly maintained and operated parking facilities, the number of parking spaces for disabled persons shall be increased or decreased on demonstrated and documented need:

Total Parking in Lot	Required Number of Accessible Spaces
Up to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2% of total
over 1000	20 plus 1 for each 100 over 1000

A minimum of four parking spaces for disabled persons shall be provided at a physical restoration rehabilitation center or hospital.

- (3) Such parking spaces shall be designated and located as follows:
 - (a) All spaces shall have accessible thereto a curb-ramp or curb-cut, when necessary to allow access to the building served, and shall be located so that users will not be compelled to wheel behind parked vehicles.
 - (b) Diagonal or perpendicular parking spaces shall be a minimum of 12 feet wide but no more than 13 feet wide.
 - (c) Parallel parking spaces shall be located either at the beginning or end of a block or adjacent to alley entrances. Curbs adjacent to such spaces shall be of a height which will not interfere with the opening and closing of motor vehicle doors.
 - (d) Disabled parking spaces shall not exceed a cross-slope of 2 percent.
 - (e) Curb ramps shall be located outside of the disabled parking spaces.

[Note: s. 316.1955 continues on with signage requirements and violation penalties.]

Section 316.1956

Parking spaces provided by nongovernmental entities for certain disabled persons.-

- (1) Any commercial real estate property owner offering parking for the general public shall provide specially designed and marked motor vehicle parking spaces for the exclusive use of physically disabled persons who have been issued parking permits...or license plate pursuant to [state statutes]. The minimum number of such parking spaces shall be as provided in s.316.1955(2)(c).

[Note: s. 316.1956 continues on with signage requirements and violation penalties.]

Section 316.1957

Parking violations; designated handicapped parking spaces.-

Section 316.1958

Out-of-state vehicles bearing handicapped identification.-

Section 316.1959

Handicapped **parking** enforcement.-

The provisions of handicapped parking shall be enforced by state, county, and municipal authorities in their respective jurisdictions whether on public or private property in the same manner as is used to enforce other parking laws and ordinances by said agencies.

Section 316.1964

Exemption of vehicles transporting certain disabled persons from payment of **parking fees** and penalties.-

No state agency, county, municipality, or any agency thereof, shall exact any fee for parking on the public streets or highways or in any metered parking space from the driver of a vehicle which displays a parking permit or a license plate issued pursuant to s.316.1958 or s.320.0848 or a license plate issued pursuant to s.320.084, s.320.0842, s.320.0843, or s.320.0845 if such vehicle is transporting a person eligible for such parking permit or license plate; nor shall the driver of such a vehicle transporting such a person be penalized for parking, except in clearly defined bus loading zones, fire zones, or in areas posted as "No Parking" zones.

Section 316.1965

Parking near rural mailbox during certain hours; penalties.-

Section 316.1967

Liability for payment of **parking ticket violations and handicapped parking violations**.-

Title XXV

Aviation

Chapter 332

Airports and Other Air Navigation Facilities

Section 332.006

Duties and responsibilities of the Department of Transportation.-

The Department of Transportation shall, within the resources provided pursuant to chapter 216:

- ...(9) Support the development of land located within the boundaries of airports for the purpose of industrial or other uses compatible with airport operations with the objective of assisting airports in this state to become fiscally self-supporting. Such assistance may include providing state moneys on a matching basis to airport sponsors for capital improvements, including...**parking areas**...

Title XXVI Public Transportation
Chapter 334 Transportation Administration
Section 334.01 "Florida Transportation Code"
Section 334.03
Definitions:

- ...(14) "Local government entity" means a unit of government with less than statewide jurisdiction, or any officially designated public agency or authority of such a unit of government, that has the responsibility for planning, construction, operation, or maintenance of, or jurisdiction over, a transportation facility; the term includes, but is not limited to, a county, an incorporated municipality, a metropolitan planning organization, an expressway or transportation authority, a road and bridge district, a special road and bridge district, and a regional governmental unit.
- ...(31) "Transportation facility" means any means for the transportation of people and property from place to place which is constructed, operated, or maintained in whole or in part from public funds. The term includes the property or property rights, both real and personal, which have been or may be established by public bodies for the transportation of people and property from place to place.

Chapter 336 County Road System
Section 336.021

County transportation system; levy of ninth-cent gas tax on motor fuel and special fuel.-

- (1) (a) Any county in the state, by extraordinary vote of the membership of its governing body or subject to a referendum, may impose, in addition to all other taxes required or allowed by law, a 1-cent gas tax upon every gallon of motor fuel and special fuel sold in the county and taxed under part I or part II of chapter 206, for the purpose of paying the costs and expenses of establishing, operating and maintaining a transportation system and related facilities and the cost of acquisition, construction, reconstruction, and maintenance of roads and streets.

Section 336.025

County transportation system; levy of local option gas tax on motor fuel and special fuel.-

- (1) (a) In addition to other taxes allowed by law, there may be imposed as provided in this section a 1-cent, 2-cent, 3-cent, 4-cent, 5-cent, or 6-cent local option gas tax upon every gallon of motor fuel and special fuel sold in a county and taxed under the provisions of part I or part II of chapter 206.

- ... (2) County and municipal governments shall utilize moneys received pursuant to this paragraph only for transportation expenditures.
- ...(7) For the purposes of this section, the term "transportation expenditures means expenditures by the local government from local or state shared revenue sources, excluding expenditures of bond proceeds, for the following programs:
 - (a) Public transportation operations and maintenance.
 - ...(g) Debt service and current expenditures for transportation capital projects in the foregoing program areas... .

Chapter 337 Contracting; Acquisition, Disposal, and Use of Property
 Section 337.11

Contracting authority of department; bids; emergency repairs, supplemental agreements, and change orders; combined design and construction contracts; progress payments; records; requirements of vehicle registration.-

- (1) The department [of Transportation] shall have the authority to enter into contracts for the construction and maintenance of all roads designated as part of the State Highway System or the State Park Road System or of any roads placed under its supervision by law. The department shall also have authority to enter into contracts for the construction and maintenance of rest areas, weigh stations, and other structures, including roads, **parking areas**, supporting facilities and associated buildings used in connection with such facilities.

Chapter 339 Transportation Finance and Planning
 Section 339.08

Use of moneys in State Transportation Trust Fund.-

- (1) The department [of Transportation] shall by rule provide for the expenditure of the moneys in the State Transportation Trust Fund accruing to the department, in accordance with its annual budget.
- (2) These rules must restrict the use of such moneys to the following purposes:
 - ...(d) To pay the cost of public transportation projects in accordance with chapter 341 and ss.332.003-332.007.
 - ...(f) To pay the cost of economic development transportation projects in accordance with s.288.063.

- (g) To lend or pay a portion of the capital costs of a revenue-producing transportation project that is located on the State Highway System or that is demonstrated to relieve traffic congestion on the State Highway System.

Section 339.09

Use of transportation tax revenues; restrictions.-

- (1) Funds available to the department [of Transportation] shall not be used for any nontransportation purpose. However, the department shall construct and maintain roads, **parking areas**, and other transportation facilities adjacent to and within the grounds of state institutions, public community colleges, farmers' markets, and wayside parks upon request of proper authorities.

Section 339.155

Transportation planning.-

The department [of Transportation] shall develop and annually update a statewide comprehensive transportation plan, to be known as the Florida Transportation Plan.

- ...(2) DEVELOPMENT CRITERIA.-...In developing the Florida Transportation Plan, the department shall consider the following:
 - ...(j) Transportation system management and investment strategies designed to make the most efficient use of existing transportation facilities.
 - (k) The total social, economic, energy, and environmental effects of transportation decisions on the community and region.
 - (l) Methods to reduce traffic congestion and to prevent traffic congestion from developing in areas where it does not yet occur, including methods which reduce motor vehicle travel, particularly single-occupant vehicle travel.
 - (m) Methods to expand and enhance transit services and to increase the use of such services.
 - (n) The effect of transportation decisions on land use and land development, including the need for consistency between transportation decisionmaking and the provisions of all applicable short-range and long-range land use and development plans.
 - ...(p) Where appropriate, the use of innovative mechanisms for financing projects, including value capture pricing, tolls, and congestion pricing.

- ...(r) Future, as well as existing, needs of the state transportation system.
- ...(x) The joint use of transportation corridors and major transportation facilities for alternate transportation and community uses.
- (y) The integration of any proposed system into all other types of transportation facilities in the community.
- ...(4) **ADDITIONAL TRANSPORTATION PLANS.-**
 - (a) Upon request by local government entities, the department may in its discretion develop and design transportation corridors, arterial and collector streets, **vehicular parking areas**, and other support facilities which are consistent with the plans of the department for major transportation facilities.

Section 339.175

Metropolitan planning organization.-

It is the intent of the Legislature to encourage and promote the development of transportation systems embracing various modes of transportation in a manner that will maximize the mobility of people and goods within and through urbanized areas of this state and minimize, to the maximum extent feasible, and together with applicable regulatory government agencies, transportation related fuel consumption and air pollution. To accomplish these objectives, metropolitan planning organizations, referred to in this section as M.P.O.'s, shall develop, in cooperation with the state, transportation plans and programs for metropolitan areas. Such plans and programs must provide for the development of transportation facilities that will function as an intermodal transportation system for the metropolitan area. The process for developing such plans and programs shall be continuing, cooperative, and comprehensive, to the degree appropriate, based on the complexity of the transportation problems.

- ...(5) **POWERS, DUTIES, AND RESPONSIBILITIES.-** The powers, privileges, and authority of an M.P.O. are as specified in this section or incorporated in an interlocal agreement authorized under s.163.01. Each M.P.O. shall perform all acts required by federal or state laws or rules, now and subsequently applicable, which are necessary to qualify for federal aid. It is the intent of this section that each M.P.O. shall be involved in the planning and programming of transportation facilities, including, but not limited to, airports, intercity and high-speed rail lines, seaports, and intermodal facilities, to the extent permitted by state or federal law.
- ...(b) In developing the long-range transportation plan and the transportation improvement program required..., each M.P.O. must, at a minimum, consider:

1. The preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing facilities more efficiently;
2. The consistency of transportation planning with applicable federal, state, and local energy conservation programs, goals, and objectives;
3. The need to relieve congestion and prevent congestion from occurring where it does not yet occur;
4. The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with all applicable short-term and long-term land use and development plans;
5. The programming of transportation enhancement activities as required by federal law;
6. The effect of all transportation projects to be undertaken in the metropolitan area, without regard to whether such projects are publicly funded;
- ... 9. The transportation needs identified through the use of transportation management systems required by federal or state law;
- ... 13. The overall social, economic, energy, and environmental effects of transportation decisions;
14. Any available methods to expand or enhance transit services and increase the use of such services;

Section 339.177

Transportation management programs.-

- (1) The Department of Transportation shall, in cooperation with metropolitan planning organizations and other affected governmental entities, develop and implement a separate and distinct system for managing each of the following program areas:
 - ...(d) Traffic congestion;
 - (e) Public transportation facilities and equipment;
 - (f) Intermodal transportation facilities and equipment.
- (2) Each metropolitan planning organization within the state must develop and implement a traffic congestion management system. The development of the state

traffic congestion management system pursuant to subsection (1) shall be coordinated with metropolitan planning organizations so that the state system is reflective of the individual systems developed by the metropolitan planning organizations.

Chapter 341 Public Transit
Section 341.011 "Florida Public Transit Act"
Section 341.031
Definitions:

- ...(9) "Commuter assistance program" means financial and technical assistance by the department [of Transportation] to promote alternatives to the use of automobiles by a single commuter. The term includes the following programs:
 - ...(b) "Transportation demand management," which means techniques that can be used to increase the efficiency of existing transportation systems by influencing demand on the system and by reducing the number of automobile trips during peak hours of highway use.
 - (c) "Transportation management association," which means an organization which helps solve transportation problems by encouraging businesses and governments to implement ridesharing and demand management strategies.

Section 341.3201 "Florida High-Speed Rail Transportation Act"
Section 341.321

Development of high-speed rail transportation system; legislative findings, policy, purpose, and intent.-

- (1) The intent of ss.341.3201-341.386 is to further and advance the goals and purposes of the 1984 High Speed Rail Transportation Commission Act; to ensure a harmonious relationship between that act and the various growth management laws... .
- ...(b) That a high-speed rail transportation system, when used in conjunction with sound land use planning, becomes a vigorous force in achieving growth management goals and in encouraging the use of public transportation to augment and implement land use and growth management goals and objectives.
- ...(2) It is the finding of the Legislature that:
- ...(h) Areas surrounding certain transit stations may, as a result of slums, blighted conditions, crime, and traffic congestion, pose a serious threat to the use of the

high-speed rail transportation system, reduce revenues from users, discourage pedestrian and traffic ingress and egress, retard sound growth and development, impair the public investment, and consume an excessive amount of public revenues in the employment of police and for other forms of public protection to adequately safeguard the users and the high-speed rail transportation system. Such areas may require acquisition, clearance, disposition, or joint private and public development, as provided in ss.341.3201-341.386, to provide **parking lots**, stores, retail establishments, restaurants, hotels, office facilities, or other commercial, civic, residential, or support facilities appurtenant or ancillary to the high-speed rail transportation system and transit stations and to otherwise provide for an environment which will encourage the use of, and safeguard, the facility.

Section 341.322

Definitions:

- ...(6) "Associated development" means property, equipment, or buildings which are built, installed, or established to provide financing, funding, or revenues for the planning, constructing, managing, and operating of a high-speed rail transportation system and which are directly associated with transit stations. The term includes property, including air rights, necessary for joint development, such as **parking lots**, stores, retail establishments, restaurants, hotels, offices, or other commercial, civic, residential, or support facilities... .
- ...(16) "High-speed rail transportation system" means any high-speed fixed-guideway transportation system for transporting people and goods... The term includes a corridor and structures essential to the operation of the line, including...**parking lots**... .

Section 341.401 "Magnetic Levitation Demonstration Project Act"

Section 341.403

Definitions:

- ...(12) "Magnetic levitation demonstration project" or "project" means an electrified railway operating on a high-speed, fixed-guideway transportation system...and whose right-of-way lies principally within one county. The term includes the total facility used by the magnetic levitation train including...**parking lots**... .

Section 341.417

Public access to transit stations.-

The general public shall have access to all transit stations for the purpose of using the magnetic levitation train, and no person may impose any direct charge or fee as a condition of such access

other than **user fees for parking** or for transportation to and from the transit station which user fees shall not unreasonably inhibit such access.

Chapter 343 Commuter Rail and Central Florida Regional Transportation Authority
Part II Central Florida Regional Transportation Authority
Section 343.61 "Central Florida Regional Transportation Authority Act"
Section 343.62
Definitions:

- ...(3) "Commuter railroad" means a complete system of tracks, stations, **parking facilities**, and rolling stock necessary to effectuate medium-distance to long-distance passenger rail service to or from the surrounding regional municipalities.
- ...(7) "Public transportation system" means, without limitation, a combination of real and personal property, structures, improvements, buildings, terminals, **parking facilities**,...or any combination thereof...used...or...useful...for the purpose of public transportation by automobile, truck, bus, rapid transit vehicle, light rail, or heavy rail.

Title XXVIII Natural Resources; Conservation, Reclamation, and Use
Chapter 380 Land and Water Management
Section 380.012 "The Florida Environmental Land and Water Management Act of 1972"
Section 380.031
Definitions:

- ...(5) "Downtown development authority" means a local government agency established under part III of chapter 193 or created with similar powers and responsibilities by special act for the purpose of planning, coordinating, and assisting in the implementation, revitalization, and redevelopment of a specific downtown area of a city.
- ...(8) "Land development regulations" include local zoning, subdivision, building, and other regulations controlling the development of land.
- ...(12) "Major public facility" means and publicly owned facility of more than local significance.

Section 380.06

Developments of regional impact.-

(1) DEFINITION.- The term "development of regional impact," as used in this section, means any development which, because of its character, magnitude, or location, would have a substantial effect upon the health, safety, or welfare of citizens of more than one county.

(2) STATEWIDE GUIDELINES AND STANDARDS.-

...(b) In adopting its guidelines and standards, the Administrative Commission shall consider and shall be guided by:

1. The extent to which the development would create or alleviate environmental problems such as air or water pollution or noise.
2. The amount of pedestrian or vehicular traffic likely to be generated.
3. The number of persons likely to be residents, employees, or otherwise present.
4. The size of the site to be occupied.
5. The likelihood that additional or subsidiary development would be generated.
6. The extent to which the development would create an additional demand for, or additional use of, energy, including the energy requirements of subsidiary developments.
7. The unique qualities of particular areas of the state.

...(d) The guidelines and standards shall be applied as follows:

1. Fixed thresholds.--
 - a. A development that is at or below 80 percent of all numerical thresholds in the guidelines and standards shall not be required to undergo development-of-regional-impact review.
 - b. A development that is at or above 120 percent of any numerical threshold shall be required to undergo development-of-regional-impact review.
2. Rebuttable presumptions.--
 - a. It shall be presumed that a development that is between 80 and 100 percent

of a numerical threshold shall not be required to undergo development-of-regional-impact review.

- b. It shall be presumed that a development that is at 100 percent or between 100 and 120 percent of a numerical threshold shall be required to undergo development-of-regional-impact review.
- (e) With respect to residential, hotel, motel, office, and retail developments, the applicable guidelines and standards shall be increased by 50 percent in urban central business districts and regional activity centers of jurisdictions whose local comprehensive plans are in compliance with part II of chapter 163. With respect to multiuse developments, the applicable guidelines and standards shall be increased by 100 percent in urban central business districts and regional activity centers of jurisdictions whose local comprehensive plans are in compliance with part II of chapter 163, if one land use of the multiuse development is residential and amounts to not less than 35 percent of the jurisdiction's applicable residential threshold. With respect to resort or convention hotel developments, the applicable guidelines and standards shall be increased by 150 percent in urban central business districts and regional activity centers of jurisdictions whose local comprehensive plans are in compliance with part II of chapter 163 and where the increase is specifically for a proposed resort or convention hotel located in a county with a population greater than 500,000 and the local government specifically designates that the proposed resort or convention hotel development will serve an existing convention center of more than 250,000 gross square feet built prior to July 1, 1992.

(3) VARIATION OF THRESHOLDS IN STATEWIDE GUIDELINES AND STANDARDS.- [petition procedures]

- ...(c) The Administration Commission shall have authority to increase or decrease a threshold in the statewide guidelines and standards up to 50 percent above or below the statewide presumptive threshold. The commission may from time to time reconsider changed thresholds and make additional variations as it deems necessary.

...(19) SUBSTANTIAL DEVIATIONS.--

- ...(b) Any proposed change to a previously approved development of regional impact...which...exceeds any of the following criteria shall constitute a substantial deviation and shall cause the development to be subject to further development-of-regional-impact review without the necessity for a finding of same by the local government:

1. An increase in the number of **parking spaces** at an attraction or recreational facility by 5 percent or 300 spaces, whichever is greater... .
- ... 10. An increase in commercial development by 6 acres of land area or by 50,000 square feet of gross floor area, or of **parking spaces** provided for customers for 300 cars or a 5-percent increase of any of these, whichever is greater.
- ...(e) A proposed change which, either individually or, if there were previous changes, cumulatively with those changes, is equal to or exceeds 40 percent of any numerical criterion in subparagraphs (b)1.-15., but which does not exceed such criterion, shall be presumed not to create a substantial deviation... .

...(24) STATUTORY EXEMPTIONS.--

- ...(g) Any expansion in the permanent seating capacity or additional improved **parking facilities** of an existing sports facility is exempt from the provisions of this section, if the following conditions exist:
 1. a. The sports facility had a permanent seating capacity on January 1, 1991, of at least 41,000 spectator seats; [or]
 - ... c. The increase in additional improved **parking facilities** is a one-time addition and does not exceed 3,500 parking spaces serving the sports facility; and
 2. The local government having jurisdiction of the sports facility includes...a finding of fact that the proposed expansion is consistent with...the approved local comprehensive plan and local land development regulations... .

Section 380.0651

Statewide guidelines and standards.-

- ...(3) The following statewide guidelines and standards shall be applied in the manner described in s.380.06(2) to determine whether the following developments shall be required to undergo development-of-regional-impact review:
 - ...(b) Attractions and recreational facilities.--Any sports, entertainment, amusement, or recreation facility,...the construction or expansion of which:
 1. For single performance facilities:
 - a. Provides **parking spaces** for more than 2,500 cars;

2. For serial performance facilities:

a. Provides **parking spaces** for more than 1,000 cars;

...For purposes of this subsection, "serial performance facilities" means those using their parking areas...more than one time per day on a regular or continuous basis.

(c) Industrial plants, industrial parks, and distribution, warehousing or wholesaling facilities.-- Any proposed...[such]...facility, which:

1. Provides **parking** for more than 2,500 motor vehicles;

...(f) Retail and service development.-- Any proposed retail, service, or wholesale business establishment or group of establishments which deals primarily with the general public onsite...that:

... 3. Provides **parking spaces** for more than 2,500 cars.

Title XXXI Regulation of Trade, Commerce, Investments, and Solicitations
Chapter 553 Building Construction Standards
Section 553.505
Exceptions to applicability of the Americans with Disabilities Act.-

Notwithstanding any provision of the Americans with Disabilities Act of 1990, churches and private clubs shall be governed by the requirements of ss.553.501-553.513. **Parking spaces, parking lots, and other parking facilities** shall be governed by the requirements of s.316.1956.

Appendix B-2: Dade County Zoning Ordinances Regulating Off-Street Parking

Dade County Code

Article VII. Off-Street Parking

Section 33.122. Required; definitions of parking space.

Permanently maintained off-street parking for vehicles shall be provided in connection with any building or premises used or designed to be used for the purposes set forth in this article. ... For the purposes of this article, each parking space shall be a minimum of eight and one-half (8.5) by eighteen (18) feet... Parking stall and aisle dimensions shall conform to the charts...incorporated as part of this section.

Section 33-122.1. Exceptions from parking lot configuration.

...Buildings which have received a certificate of use and occupancy prior to the effective date of this ordinance [3-19-91] may utilize the following standards for expansion...

- (1) Standard size parking stalls shall measure nine (9) feet by nineteen (19) feet...
- (2) Compact stalls shall measure seven and one-half (7.5) feet by fifteen (15) feet.

Section 33-123. Approval of plan before issuance of permits.

Prior to the issuance of any...permits, a suitable sketch must be presented to the Building and Zoning Department indicating the parking layout...

Section 33-124. Standards.

Off-street parking shall be provided in accordance with...minimum standards, unless otherwise approved as a result of a public hearing...

(a) Dwellings:

- (1) Single-family dwellings not specifically referenced elsewhere in this section shall be provided two (2) parking spaces.
- (2) Two-, three- and four-unit dwellings shall be provided two (2) per unit.
- (3) Townhouses shall be provided a minimum of two (2) off-street parking spaces per townhouse unit. ...In addition,...a minimum of twenty-five hundredths (0.25) visitors parking spaces per townhouse shall be provided... Individual garages shall not be credited towards the parking requirement.
- (4) Cluster communities shall have two and one-quarter (2.25) parking spaces provided for each dwelling unit either on the individually owned lot(s) or on

common property. ...Individual garages shall not be credited towards the parking requirement.

- (5) Zero lot line communities shall have a minimum of two (2) off-street parking spaces provided on each platted lot. ...Individual garages shall not be credited towards the parking requirement.

- (6) Five (5) or more unit apartment buildings or apartment hotels:
One and one-half (1.50) parking spaces for each guest room, efficiency, or one bedroom unit.

One and three-quarters (1.75) parking spaces for each two-bedroom unit.

Two (2.0) parking spaces for each three- or more bedroom unit.

- (7) A minimum of two (2) off-street parking spaces shall be provided for each mobile home space...

- (b) *Hotels, rooming houses:*

At least one parking space for each of the first forty (40) individual guestrooms or suites; one additional parking space for every two (2) guest rooms or suites thereafter. Public meeting rooms in hotels shall be further controlled as to parking by subsection (e) of this section and by subsection (k) where the meeting room does not contain permanent seats; and restaurants by subsection (i) and (j). In addition, one parking space shall be provided for each four (4) employees.

- (c) *Motels, tourist courts and transient accommodations.* One parking space for each individual sleeping room or bedroom.

- (d) *Churches.* At least one parking space for each fifty (50) square feet or fractional part thereof of the seating area in the main auditorium (sanctuary)...

- (e) *Reserved.*

- (f) *Hospitals.* At least one parking space for each of the first three hundred (300) beds and one additional parking space for every two (2) additional beds thereafter for patients contained in such building, plus one parking space for each three (3) employees and resident staff members.

- (g) *Sanitariums, convalescent homes, homes for the aged and similar institutions.* At least one parking space for each two (2) beds for patients contained in such buildings, plus one parking space for each two (2)

employees.

(h) *Commercial:*

- (1) Retail - Food,...grocery,...drug and sundry,...department,...retail stores,...banks, post offices, mortuaries, funeral homes, waiting rooms stations for common carriers and shopping centers...one parking space for each and every two hundred fifty (250) square feet of gross floor area or fractional part thereof.
 - (2) Auto dealership showrooms, garage and gas station bay areas...three (3) parking spaces for the first twenty-five hundred (2,500) square feet of floor area, or fractional part thereof, and one parking space for each additional five hundred (500) square feet of gross floor area, or fractional part thereof, plus three (3) parking spaces for each five thousand (5,000) square feet, or fractional part thereof, of open lot area. Office and retail parts areas shall be provided as otherwise contained in this article.
 - (3) Plant nurseries...eight (8) spaces for the first acre...and one parking space for each two (2) acres thereafter up to ten (10) acres. One additional...space shall be provided for each five (5) acres...thereafter.
 - (4) Open lot commercial uses,...used car lots, storage yards and recreational vehicle sales lots shall be provided three off-street parking space [sic] for each five thousand (5,000) square feet...
 - (5) Self service gas station/mini marts...one parking space for each two hundred fifty square feet (250),...with a minimum of three (3) spaces...
 - (6) Wholesale showrooms in the industrial districts shall be provided one parking space for each six hundred (600) square feet of showroom area...
 - (7) All [other] commercial uses shall be provided three (3) parking spaces for the first twenty-five hundred (2,500) square feet of gross floor area...and one parking space for each and every five hundred (500) square feet of gross floor area...
- (i) *Restaurants, lounges, nightclubs, or similar places dispensing food, drink or refreshments.*
- (1) Table service establishments...one parking space for each fifty (50) square feet of floor area, or fractional part thereof devoted to patron use.
 - (2) Take-out establishments...one parking space for each two hundred fifty (250) square feet of gross floor area, or fractional part thereof.

(j) *Reserved.*

(k) *Recreational and entertainment use:*

- (1) Art galleries, amusement centers and libraries...one parking space for each two hundred fifty (250) square feet...
- (2) Banquet halls, convention halls and private clubs...one parking space for each fifty (50) square feet of patron area...
- (3) Bowling alleys, skating rinks, and gun ranges...one parking space per two hundred fifty (250) square feet of gross floor area... Office, retail, restaurant and other areas in conjunction therewith shall have parking provided as otherwise contained in this article.
- (4) Dance, karate, and aerobics schools, and health/exercise studios...one parking space for each fifty (50) square feet of classroom area... Office, retail, and restaurant areas in conjunction therewith shall have parking provided as otherwise contained in this article.
- (5) Golf courses...three (3) parking spaces per hole plus three (3) additional spaces. Office, retail, restaurant and other areas in conjunction therewith shall have parking provided as otherwise contained in this article.
- (6) Live-aboard marinas...one (1) parking space per boat slip.
- (7) Non-live-aboard marinas...one (1) parking space for each two (2) boat slips.
- (8) Boats stored in racks...one (1) parking space for each three (3) boat racks.
- (9) Stadiums and basketball gymnasiums...at least one (1) parking space for each four (4) seats.
- (10) Commercial tennis and racquetball courts...four (4) parking spaces per court. Office, retail, and restaurant areas in conjunction therewith shall have parking provided as otherwise contained in this article.
- (11) Theatres, including movie theatres, and general auditoriums...one parking space for each fifty (50) square feet of gross floor area...
- (12) Open lot recreational use parking requirements shall be determined by the Director and such requirements shall be based on the number of people that can reasonably be expected to be on such premises at one time. Said determination shall be calculated on a basis of one parking space for each four (4) persons.

(l) *Schools.*

- (1) Day nurseries, kindergarten and elementary schools: Total parking spaces shall equal the combined total of personnel and transportation vehicles.
- (2) Junior high [schools]: Total parking spaces shall equal one and one-quarter (1-1/4) times the combined total of personnel and transportation vehicles.
- (3) High schools, trade schools and colleges: One parking space per two hundred (200) square feet of classroom area, including laboratories, libraries and administrative areas. Housing facilities on college campuses must provide off-street parking of two (2) spaces for each three (3) sleeping rooms. Other such uses, such as restaurants, auditoriums, theaters, etc., shall provide parking as required in this section for such uses. In addition, in connection with the foregoing schools, one parking space shall be required for each four (4) employees, excluding teachers.

(m) *Office, professional building or similar uses.* One parking space for each three hundred (300) square feet of gross floor area...

(n) *Industrial.*

- (1) Where the building is designed for, and to be used by, a single occupant (user), one parking space...for each one thousand (1,000) square feet of gross floor area in the building up to ten thousand (10,000) square feet and then one space for each two thousand (2,000) square feet of gross floor area thereafter.
- (2) ...multiple occupants (users), one parking space...for each one thousand (1,000) square feet of the gross floor area in the building. A minimum of two (2) parking spaces...for each bay in the building. ...In determining the number of spaces to be provided, the formula requiring the greatest number of parking spaces shall be adhered to.
- (3) Where open lot or walled-in uses only are involved,...two (2) parking spaces for each five thousand (5,000) square feet of lot area shall be provided, or one space for each two (2) employees shall be provided, whichever requires the greatest number of parking spaces... If retail sales are conducted or offices provided in connection with such industrial use, additional off-street parking will be provided as applies to the commercial uses or offices. The portion of the structure allocated for retail sales or offices shall be used as a basis for determining the additional off-street parking to be provided.

(o) *Housing for low and/or moderate income for the elderly and/or handicapped.*

- (1) For any apartment building exceeding four (4) units, fifty hundredths (0.50) parking space shall be provided for each dwelling unit in the apartment building.
 - (2) ...The lot area not used as a result of the decrease in parking spaces as required under Section 33-124(a) shall remain as open space and shall be landscaped or used for recreational purposes. Said open space shall be in addition to the open space requirements of the Code...
 - (3) If it is determined by the County Building Department at the time of annual renewal of certificate of occupancy that the parking reduction of fifty hundredths (0.50) space per unit does not allow adequate parking for the apartment building, the owner must increase the number of parking spaces to fulfill the needs as determined by the Director of the Building and Zoning Department.
- (p) *Self-service storage facilities.*
- (2) ...off-street parking shall be provided on the following basis: One parking space per five thousand (5,000) square feet of building area for the first twenty thousand (20,000) square feet of building; one parking space per ten thousand (10,000) square feet (or fraction thereof) of building area thereafter; and one parking space for the manager's apartment, where provided. One parking space per four hundred (400) square feet of gross office area (or fraction thereof) shall also be provided. In the application of these regulations, a minimum number of (5) off-street parking spaces shall be provided for any self-service storage facility regardless of size.

Section 33-125. Parking area on application for building permit.

Applications for building or use permits shall indicate the area to be used for parking and permits shall be issued stating that such area shall be so reserved and developed. Recordable restrictions so reserving such area may be required at the discretion of the Director [of the Building and Zoning Department]. Such area reserved for parking area will be marked on the zoning maps and no permits for additional use of such area shall be issued. Area reserved for parking in connection with any use shall be under the same ownership as that of the use itself.

Section 33-126. Surface of parking areas.

Section 33-127. Districts where parking area permitted between setback line and right-of-way.

Section 33-128. Location on same lot as use; exceptions.

Off-street parking areas shall be located on the same lot, parcel or premises as the use to be served...

- Section 33-129.** **Application of provisions to change of uses.**
- Section 33-130.** **Between business structure and public park.**
- Section 33-131.** **Using parking areas for commercial parking lot.**
- Section 33-132.** **Marking parking spaces; backing out into street; improvement of frontage.**

Appendix B-3: Municipal Zoning Ordinances Regulating Off-Street Parking

Bal Harbour Village Code

Sec. 21-381. Generally.

- (a) Except as otherwise provided in this chapter, when any Building or Structure is erected or structurally altered, off-street parking spaces shall be provided in accordance with the regulations set out in this article.
- (b) In the Ocean Front (OF) District, 100 percent of required parking spaces shall be contained in a fully enclosed Parking Structure.

Sec. 21-382. Interpretation of requirements.

- ...(c) *Mixed uses.* In the case of mixed uses within a Building or Structure, the parking spaces required shall equal the sum of the requirements of the various uses computed separately.

Sec. 21-383. Location.

- (a) All parking facilities shall be provided on the same Lot as the Structure or use served, except where specifically permitted on a different Lot by other provisions of this section.

Sec. 21-384. Number of spaces.

The schedule of off-street parking requirements shall be as follows:

- (1) *Single-family detached dwellings:* Two parking spaces for each dwelling unit, with not less than one space provided within a garage or Carport.
- (2) *Multiple-Family Dwellings:* One and one-half parking spaces for each dwelling unit, plus one additional space for each ten dwelling units in the total apartment complex, plus the required spaces for any business establishments contained within the complex.
- (3) *Hotels:* One parking space for each Guest Room capable of separate occupancy, plus one space for each 400 square feet of public assembly area, plus the required spaces for any business establishments contained within the complex.
- (4) *Business establishments:* Four parking spaces for each 1,000 square feet of leasable floor area or 90 percent of gross floor area, whichever is the greater, except for the following uses:

a. Municipal Buildings.

b. Churches.

- (5) *Private Clubs*: One parking space for each five members, plus one space for each three employees.

Sec. 21-385. Design and maintenance.

[This section specifies the stall size dimensions for various layouts.]

- ...(o) *Minimum dimensions*. Is a table showing parking stall minimum dimensions for both angle and straight-in parking lot designs. Interestingly, this table indicates straight-in stall sizes of 9.0ft, 9.5ft, or 10.0ft x 19.0ft.

Sec. 21-386. Screening.

Sec. 21-387. Landscaping.

Bay Harbor Islands Town Code

Article II. Off-Street Parking

Sec. 23-23. Definitions.

Sec. 23-24. Commercial parking approval required; enclosing commercial parking lots; parking of vehicles on certain unimproved lots; number of parking spaces required generally.

- (a) In the BAA business district commercial parking is prohibited except on specific approval of the town council. Commercial parking is defined as the operation of parking lots either with or without a charge. ...Parking of vehicles on unimproved property on any lot in Blocks 11, 12, 20 and 21 is prohibited, excepting vehicles owned by the property owner, unless such parking fully complies with the provisions herein set forth.
- (c) The number of parking spaces to be provided in particular instances is as follows:
 - (1) Single-family dwelling: Two (2) spaces.
 - (2) Apartment buildings, apartment hotels and two-family dwellings: A minimum of two (2) parking spaces shall be required on the building plot for each dwelling unit...
 - (3) Hotels: One space for each of the first twenty (20) individual guest rooms. One added space for each two (2) guest rooms, or fraction thereof, in excess of twenty (20).
 - (4) Places of assembly, restaurants, public dining rooms, bars, cocktail lounges: Two (2) parking spaces for every five (5) units of seating capacity, or fraction thereof.
 - (5) Office buildings for retail, commercial, professional and business uses: One space for each three hundred (300) square feet of gross floor area.
- (e) Restaurants which are open for business only between the hours of 6:00 p.m. and 2:00 a.m. are exempt from the parking space requirements set forth above, and no parking spaces are required.

Sec. 23-25. Exclusive right in designated areas.

Sec. 23-26. Unity of title on adjacent offstreet parking lot.

Sec. 23-27. Requirements in case of dedication of eleven foot strip.

Sec. 23-28. Compliance with specifications.

Sec. 23-29. Establishing parking area away from certain lots.

Sec. 23-30. Determining amount of space.

In determining the amount of space required to be set aside for the parking of vehicles, the following shall be used:

...(D) The minimum parking space for off-street parking shall be nine (9) feet by twenty (20) feet...

Sec. 23-31. Parking on corner lots.

Sec. 23-32. Standing space on lots where parking spaces provided away from the lot.

Sec. 23-33. Exclusive use parking area.

Sec. 23-34. Obedience to signs.

Sec. 23-35. Towing and impounding of vehicles.

Sec. 23-36. Severability.

Sec. 23-37. Punishment for violation.

Any person, firm, or corporation who shall violate or fail to comply with any of the provisions of this article shall be punished by a fine of not less than five dollars (\$5.00) nor more than five hundred dollars (\$500.00) or be imprisoned for not less than thirty (30) days, or both, in the discretion of the town judge. Each day that a violation exists shall constitute a separate offense.

Village of Biscayne Park Code

5.6. Off-street parking.

5.6.1 *Applicability.* Off-street parking facilities shall be provided for all development within the village pursuant to the requirements of this code. The facilities shall be maintained as long as the use exists that the facilities were designed to serve.

5.6.2 *Computation....*

5.6.3 *Number of parking spaces required.* The table below specifies the required minimum number of off-street automobile parking spaces. The number of off-street parking spaces for uses not listed in the table shall be determined by the planning board....

<i>Use</i>	<i>Minimum Off-Street Parking Requirement</i>	
	<i>Resident Parking</i>	<i>Visitor Parking</i>
(a) Residential		
Detached one-family:		
1, 2, & 3 bedrooms	2 spaces/unit	1 space/unit
4 bedrooms	3 spaces/unit	1 space/unit
Detached two-family:		
2, 3 or more bedrooms	2 spaces/unit	0.5 spaces/unit
(b) Recreation, Parks, Club, determined by the planning board		
(c) Public assembly		
Church	1 space/3 seats or 1 space/35 square feet of gross auditorium floor area	

5.6.4 *Handicapped parking spaces.* Any parking area to be used by the general public shall provide suitable, marked and paved parking spaces for handicapped persons. The number, design, and location of these spaces shall be consistent with the requirements of Sections 316.1955, 316.1956, F.S., or succeeding provisions. No parking spaces required for the handicapped shall be counted as a parking space in determining compliance with section 5.6.3, public uses, above, but optional spaces for the handicapped shall be counted....

5.6.5 *Parking in medians prohibited.*

5.6.6 *Existing nonconforming minimum off-street parking requirements.*

5.6.7 *Historic preservation exemption.*

5.6.8 *Design standards for off-street parking.* Except as provided herein, all required off-street parking spaces and the use they are intended to serve shall be located on the same parcel. The size and layout of these spaces shall be according to the Dade County Code and Public Works Manual, Metro-Dade County.

City of Coral Gables Zoning Code
Article XIII Off-Street Parking and Loading
Sec. 13-2 Plan, Size and Character

Off-Street Parking Standards - Drawing No. 1600-20M rev. October 1, 1992

[This drawing specifies standard parking stall dimensions for various parking layouts. It was revised in 1992 (Ordinance #3018) to delete references to compact car size stall sizes and spacing. The standard size for 90° parking is 8.5ft x 18.0ft.]

Sec. 13-6 Minimum Off-Street Parking Requirements - By Use

[These tables are very detailed, using some 33 main categories and an extraordinary number of sub-categories. Examples are included here for general reference only.]

Table 1 - Residential Uses

Single Family Residence: One (1) parking space consisting of a porte-cochere, breezeway or garage.

Apartment Building: For all of the City of Coral Gables except that area lying south of the Miami City limit line and east of LeJeune Road and Old Cutler Road, the following parking spaces shall be provided:

- (a) One and one-half (1-1/2) parking spaces for each efficiency, one (1) bedroom or two (2) bedroom apartment units;
- (b) Two (2) parking spaces for each three (3) bedroom apartment units;
- (c) Three (3) parking spaces for each apartment containing four (4) or more bedrooms;
- (d) One (1) parking space for each fifteen (15) percent of the apartment units for supplemental parking.

Hotel:

- (a) One (1) parking space for each sleeping room;
- (b) One (1) employee parking space for each eight (8) hotel sleeping rooms;
- (c) Spaces required for other uses in hotel such as retail shops, beauty shops and barber shops, bars, restaurants, meeting rooms and etc.

Table 2 - Commercial Uses

[This table is not categorized by land use. The categorical tabulation is by the number of square feet of gross building floor area per one parking space.]

One (1) parking space required per square feet of gross building floor area shown below:

<u>100 square feet</u>	<u>200 square feet</u>	<u>250 square feet</u>	<u>300 square feet</u>	<u>etc.....</u>
Business Schools	Beauty Shops	Animal Hospitals	Banks	
Trade Schools	Clinics, Medical	Cat Beauty Shops	Business and Professional Offices	
Vocational Schools	& Dental Outside the Central Business District	Civic Clubs	outside the Central Business District	
	Medical & Dental Buildings outside the Central Business District	Clinics, Medical & Dental in the Central Business District	Dry Cleaners	
	Post Office	Community Centers	Laundries	
		Dog Beauty Shops	Savings Institutions	
		Fraternal Buildings	Self-service Laundries	
		Libraries		
		Lodge Buildings		
		Medical & Dental Buildings in the Central Business District		
		Museums		
		Private Clubs		
		Union Halls		
		Veterinary Clinics		

One and one-half (1-1/2) parking spaces required per sq. feet of gross building floor area shown below:

<u>100 square feet</u>	<u>200 square feet</u>
Outside Central Business District	In the Central Business District
Bars	Delicatessens
Beer Gardens	Lunch Counters
Cafes	Restaurants
Cafeterias	Taverns
Cocktail Lounges	Same List

Central Business District:

- (a) For delineation of the Central Business District refer to Section 13-5(d)1.
- (b) Buildings not exceeding a (F.A.R.) of 1.25 located within the Central Business District and used for other than residential purposes are not required to provide off-street parking (Section 13-5

Table 3 - untitled

Hospitals Two (2) parking spaces for each bed.

Auditoriums
and Assembly Halls

One (1) parking space for each four (4) fixed seats plus one (1) parking space for each forty (40) sq. ft. of floor area where movable seats.

Convention Halls
Skating Rinks

Exhibition Halls
Stadiums

Gymnasiums
Sports Arenas

One (1) parking space for each five (5) spectator seats, or one (1) parking space for each two hundred (200) sq. ft. of gross floor area, whichever is greater.

Churches

One (1) parking space for each five (5) fixed seats plus one (1) parking space for each fifty (50) sq. ft. of assembly room area not having fixed seats (not to include classrooms).

Funeral Chapels
Funeral Homes
Mortuaries

One (1) parking space for each four (4) fixed seats plus one (1) parking space for each forty (40) sq. ft. of floor area where movable seats with a minimum of ten thousand (10,000) sq. ft. of parking area.

Theatres, Motion
Picture Houses

One (1) parking space for each four (4) fixed seats.

...Car, Sales and
Service

- (a) One (1) parking space for each three hundred (300) sq. ft. of office space;
- (b) One (1) parking space for each six hundred (600) sq. ft. of showroom floor area;
- (c) One (1) parking space for each five hundred (500) sq. ft. of remaining gross floor area.

Convalescent Homes
Nursing Homes

Group Homes
Rest Homes

Homes for the Aged
Sanitariums

One (1) parking space for each staff member and one space for every three (3) residents (based upon the maximum number of residents permitted to reside therein).

Table 4 - Industrial and Miscellaneous Uses

One (1) parking space for each three hundred (300) sq. ft. of office floor plus one (1) parking space for each 500 or 1,000 sq. ft. of remaining gross floor area as shown below:

500 square feet

Automobile Repair Shop
Paint and Body Shop

1,000 square feet

Assembly Plants
Boats, Display and Sales
Bottling Plants
Contractor Shop such as General, Plumbing, Electrical, Roofing and etc.
Distributorship with Warehousing
Electronic Plants
Heat Processing Plants
Manufacturing Plants
Research Laboratories
Sign Painting Shops
Storage Establishments
Testing Laboratories
Tire and Recapping Shops
Warehouses and Welding Shops
Wholesale Distributor with Warehousing
Upholstering Shops

Village of El Portal Code
Article III. GENERAL REGULATIONS

Sec. 24-17. Parking and on-site traffic.

(a) *Parking space requirements.*

- (1) The number of parking spaces required for uses not specifically listed in the matrix below shall be determined by the village council. The council shall consider requirements for similar uses and appropriate traffic engineering and planning data, and shall establish a minimum number of parking spaces based upon the principles of this section.
- (2) Where a mixed use development is proposed, whether the mixed uses are in separate buildings within a development or in a single building, the parking standards for each proposed use shall be required, unless a reduction is granted by the village council as a part of site plan approval.

TABLE OF REQUIRED PARKING SPACES

<u>Specific Uses</u>	<u>Required Parking Spaces</u>
Bank	1 per 125 square feet of floor area and the stacking lane requirement for drive-in banks
Group home	1 per 5 beds, plus 1 per employee
Postal station	1 per 125 square feet of gross leasable area; plus 1 per employee on the largest shift
Professional office	1 per 300 square feet of gross leasable area
Residential	2 per dwelling unit
Restaurant	1 space per 150 square feet of gross leasable area, or 1 per 3 seats, whichever is greater, plus, 1 per 2 employees on the numerically largest shift
Restaurant, fast food	1 per 75 feet of gross leasable floor area, or 1 per 3 seats, whichever is greater, plus 1 per 2 employees on the numerically largest shift

Retail and service establishment including medical and dental office	0 to 50,000 square feet, 1 per 200 square feet of gross leasable floor area Over 50,000 square feet, 1 per 250 square feet of gross leasable floor area
School	1 per 3 staff members and 1 per 6 auditorium seats
Theater and place of assembly	1 per 3 seats, whether fixed or not fixed assembly

(b) *Design of parking lots.*

- (1) Parking spaces to comply with this article must be hard-surfaced, adequately drained, and not less than one hundred sixty (160) square feet in area each, with clear access thereto (the area needed for clear access thereto to be in addition to the one hundred sixty (160) square feet required for each parking space as aforesaid) and shall be located on the same property as the main buildings...
- ...(3) For churches or other similar institutions where parking needs are limited to one (1) or two (2) days per week, seventy-five (75) percent of the required parking spaces may be grass....

The City of **Florida City** uses the Dade County Code

Golden Beach is entirely residential, made up of large single-family detached homes. Their building code does not address parking. The homeowner supplies "sufficient" parking on site.

City of Hialeah Code
Section 32-7

(14) *Parking requirements:*

(a) Definitions:

- (1) *Parking space.* A standard parking space is a rectangular area nineteen (19) feet long and nine (9) feet wide;...
- (2) *Compact parking space.* A compact parking space is a rectangular area sixteen (16) feet long and seven and one-half (7.5) feet wide;...

(b) Minimum dimensions:

- (1) *Standard parking space dimension.* Nineteen (19) feet long and nine (9) feet wide,...
 - (2) *Compact parking space dimension.* Sixteen (16) feet long and seven and one-half (7.5) feet wide,...
 - (3) *Compact space percentage and threshold requirements.* Compact spaces shall account for no more than twenty-five (25) per cent of the total spaces in any parking lot and shall only be permitted if the total number of spaces in the lot, including permissible compact spaces, is equal to ten (10) or more spaces.
- (c) Parking spaces required: There shall be required paved off-street, accessible parking spaces as follows:
- (1) *R-1 (Single-Family Residential Units), R-2 (Two-Family Residential Units) and R-4 (Townhouse Residential Units).* Two (2) spaces per residential living unit...
 - (2) *Churches.* One space for each forty (40) square feet, or part thereof, of the main auditorium.
 - (3) *Convalescent homes.* One space for each four (4) patient beds, or part thereof; one space each for the administrator, staff doctor and head nurse;...
 - (4) *Hospitals.* One space for each two (2) patient beds or part thereof; one space each for the administrator, staff doctor and head nurse;...
 - (5) *Apartments.* Two (2) spaces per one and two bedrooms; one-half (1/2) space for each additional bedroom, in R-3-1, R-3-2, R-3-3, R-3-4, and R-3-5 (Multiple-Family Zoning Districts).

- (6) *Hotel and motel*. One and one-eighth (1-1/8) spaces per living unit.
- (7) *Business and commercial zones*. In all areas zoned for business or commercial uses, the building of any building, except for churches, convalescent homes and hospitals, erected after the adoption thereof, shall provide one space for each two hundred (200) square feet, or part thereof, as contained in the floor with the greatest area,...and one car space for each one thousand (1,000) square feet or part thereof, of the remaining floor area,...
- (8) *M (Industrial Park District)*. One space for each six hundred (600) square feet, or part thereof, of floor area....
- (9) *M-1 (Industrial District), M-2 (Industrial District)*. One space for each one thousand (1,000) square feet, or part thereof, of floor area....
- (10) *S (Schools) private*. One and one-half (1-1/2) spaces per classroom.
 - (d) Location of required off-street parking:... Building(s) abutting or contiguous to any Florida Power and Light Company's easements may use the area under the transmission lines of the Florida Power and Light Company's easements, with approval of Florida Power and Light, to meet up to fifty (50) per cent of the required off-street parking area.
 - ...(f) Permits and certificate of occupancy: No building plans shall be approved for permit and no certificate of occupancy shall be issued until plans for parking, as provided herein, shall be shown.

City of Hialeah Gardens Land Development Regulation Code

Section 155.41 Off-Street Parking

155.41.02 Table of Off-Street Parking Requirements

TABLE TWO: OFF-STREET PARKING REQUIREMENTS

	Use	Parking Spaces Required Per Unit of Measurement
1.	Single- and two-family dwellings	Two (2) per dwelling unit
2.	Multi-family dwellings and townhouses	2.0 per dwelling unit plus one (1) per each five units or portion thereof
3.	Churches or other places of worship	One (1) per four permanent seats in the main auditorium of NFPA maximum use fire requirements
4.	Social, swimming, golf and tennis	One (1) per 500 square feet of floor area plus four (4) per each court, one (1) per each 100 square feet of pool area, six (6) per each hole of golf
5.	Neighborhood retail, retail,	One and one-half (1.5) per 400 square feet business and commercial of total floor area; provided, however, in no event, shall there be less than two (2) parking spaces for each use
6.	Shopping center	One (1) per 200 square feet of total ground floor area. One (1) per 1,000 square feet of total floor area of each upper story.
7.	Hotels, motels, and motor inns	One and one-tenth (1.1) per dwelling unit plus one (1) per 500 square feet of accessory commercial floor area except for a restaurant which shall be the same as 9. below [sic]
8.	Libraries, art museums, and similar cultural facilities	One (1) per 700 square feet

- | | | |
|-----|---|--|
| 9. | Medical or dental offices, clinics, | Seven (7) for each doctor or dentist or legal offices attorney or 100 square feet of floor space whichever is greater |
| 10. | Restaurants, nightclubs, or other | One (1) per three seats as established by eating places the latest standards of the South Florida Building Code or one (1) per 200 square feet of floor area, whichever is greater |
| 11. | Theatres, auditoriums, or other places of public assembly | One (1) per each four seats |
| 12. | Warehouse or wholesale commercial | One (1) per 750 square feet; however, each uses separate business shall provide a minimum of three (3) spaces |
| 13. | Self-service storage facilities | One (1) per 5,000 square feet for the first 20,000 square feet, and one (1) per 10,000 square feet (or fraction thereof) of building area thereafter; one (1) for the manager's apartment, where provided; and one (1) per 400 square feet of gross office area (or fraction thereof). A minimum of five (5) parking spaces shall be provided. |
| 14. | Super-markets, banks, amusement | One (1) per 200 square feet of total ground parks, and the like floor area. One (1) per 1,000 square feet of total floor area of each upper story. |

- 155.41.03 Special Parking Spaces
- A. **Parking for Handicapped Persons**
- B. **Motorcycle Parking**

The City of Hialeah Gardens City Council passed (3 May 1994), by a vote of four to one, Ordinance No. 94-04...

AN ORDINANCE...ESTABLISHING REGULATIONS AND LICENSING OF PARKING LOTS AND GARAGES...; LICENSE AND SITE PLAN REVIEW REQUIREMENT;...SETTING AND ESTABLISHING LICENSE FEES;...PROVIDING

FOR RATES TO BE FILED WITH CLERK AND FOR CHANGES IN RATES;...PROVIDING FOR INCLUSION IN THE CODE;...AND PROVIDING FOR AN EFFECTIVE DATE.

Section 1. *Definition of Terms.*

Section 2. *License and Site Plan Review Required.*

Section 3. *Application for License and Site Plan Review.*

Section 4. *Review Procedure.*

Section 5. *License Fees.* The license fee for the operation of a parking lot shall be \$200.00 with additional fees to be charged in accordance with the following schedule of capacities:

Parking spaces for one to ten automobiles add	\$15.00 ea.
Parking spaces for eleven to twenty automobiles add	\$20.00 ea.
Parking spaces for twenty-one or more automobiles add	\$30.00 ea.
Parking spaces for one to ten trucks add	\$25.00 ea.
Parking spaces for eleven to twenty trucks add	\$30.00 ea.
Parking spaces for twenty-one or more trucks add	\$35.00 ea.
Parking spaces for one to ten buses add	\$20.00 ea.
Parking spaces for eleven to twenty buses add	\$25.00 ea.
Parking spaces for twenty-one or more buses add	\$30.00 ea.

Section 6. *Employee's Identification Cards - Fee.*

Section 7. *Issuance of License.*

... Section 9. *Revocation of License.*

Section 10. *Rates to be Filed with Clerk.* Every licensee shall file with the City Clerk at the time of application for license a complete schedule of rates and charges to be made for storing or parking motor vehicles on the premises to be licensed.

Section 11. *Changes in Rates.*

... Section 25. *Penalties.* Any owner and/or operator of parking lots and/or garages in the City...in violation of the terms of this ordinance shall be subjected to one of the following penalties:

A. ...punished by a fine, not exceeding \$500.00, or by a jail sentence, not exceeding sixty (60) days, or both...

B. Issuance of a Notice of Violation by a City...Code Enforcement Officer requiring the owner and/or operator to appear before the City...Code Enforcement Board which shall have jurisdiction to impose penalties pursuant to the authority granted by Chapter 162, Florida Statutes.

City of Homestead Code
DIVISION 2. OFF-STREET PARKING
Sec. 30-431. Required.

- (a) There shall be permanently maintained off-street parking for vehicles in connection with any building or premises used or designed to be used for the purposes set forth in this division.
- (b) For the purposes of this chapter, it is determined that one (1) automobile parking space shall be a minimum of ten (10) by twenty (20) feet usable for the parking of an automobile...

Sec. 30-432. Intent.

Sec. 30-433. Off-street parking area requirements in all districts.

- (a) There shall be permanently maintained off-street parking for vehicles in connection with any building or premises used or designed to be used for the purposes set forth in this division. For the purposes of this chapter, it is determined that one (1) automobile parking space shall be a minimum of ten (10) by twenty (20) feet (two hundred (200) square feet), usable for the parking of an automobile; except that in residentially zoned areas of the city, the minimum allowable size for one (1) automobile parking space shall be a minimum of nine (9) by nineteen (19) feet (One hundred seventy-one (171) square feet), usable for parking of an automobile;...
- (b) The off-street parking requirements shall be in accordance with the following standards:
 - (1) A-1 one family (one-acre estate) district shall have one (1) paved parking space
 - (2) A-2 one family (one-half-acre estate) district shall have one (1) paved parking space.
 - (3) R-1 one family district shall have one (1) paved parking space.
 - (4) R-2 district shall have two (2) paved parking spaces per unit.
 - (5) R-TH district shall have two (2) paved parking spaces per unit.
 - (6) R-CH district shall have two (2) paved parking spaces per unit.
 - (7) R-3 district shall have two (2) paved parking spaces per unit.

(8) R-4 hotel and motel district:

- a. Hotels shall have one (1) paved parking space for each of the first twenty (20) rooms and one (1) additional space for each four additional rooms.
- b. Motels shall have one (1) paved parking space for each room.
- c. All others shall have one (1) paved parking space for each three hundred (300) square feet of floor area.

(c) The following standards shall apply in all B uses:

- (1) Commercial shall have one (1) paved parking space for each three hundred (300) square feet of floor area in excess of twenty-foot rear loading zone.
 - (2) Restaurants and cafeterias shall have one (1) paved parking space for each four (4) seats.
 - (3) Drive-in restaurants and barbecue stands shall have a minimum of twenty (20) paved parking spaces.
 - (4) Places of assembly, recreational establishments, churches, schools, theatres, auditoriums, etc., shall have one (1) paved parking space for each four (4) seats.
 - (5) Office buildings shall have one (1) paved parking space for each four hundred (400) square feet of floor area.
 - (6) Warehouse parking shall be the same as the industrial requirement.
- (d) The minimum standard for parking requirements in the business uses is three (3) paved parking spaces per store, regardless of the three hundred (300) square feet requirement as set forth above.
 - (e) The standards in all I uses shall be one (1) paved parking space for each one thousand (1,000) square feet of floor space or three (3) employees, whichever is greater, plus a paved loading zone.

Sec. 30-434. Parking in right-of-way allowed for certain multi-family dwellings.

Sec. 30-435. Plan required.

Sec. 30-436. Application for building or use permits.

Sec. 30-437. Combination uses.

In the event of the combination of two (2) or more of the uses indicated in this division, the parking space required for each of such uses shall be provided.

Indian Creek Village is entirely residential, made up of large single-family detached homes. Their building code does not address parking. The homeowner supplies "sufficient" parking on site.

The **City of Islandia** has no vehicles except those used by the Park Rangers.

The **City of Key Biscayne** is currently writing the off-street parking sections of their municipal building code. For the time being the City of Key Biscayne uses the Dade County Code.

The **City of Medley** uses the Dade County Code.

The **City of Miami Code** is extensive and complicated. Various parking ordinances are in effect in various districts (including so-called "overlay" districts) throughout the City. The abstractions below do not cover the entire Code, rather they are representative of the Code's complexity.

Sec. 602.10. Minimum offstreet parking.

Minimum offstreet parking shall be as required for C-1 district, unless otherwise indicated for a particular use. No variance for the reduction of the number of parking spaces is permitted.

1. For all nonresidential development existing and/or in operation at the time of the passage of this ordinance, all required nonresidential parking may be permitted offsite anywhere within that part of the SD-2 district [location description], subject to the requirements and conditions of section 602.12. Special Exemption approval is not required for offsite parking and one hundred (100) percent of required parking may be located offsite. All new development to be approved after passage of this ordinance shall be subject to all requirements and limitations of section 918.
2. In any mixed-use development including a theater, spaces required for other nonresidential uses may be credited toward meeting requirements for the theater to the extent justified by timing of peak demands, by a Class II Special Permit.
3. Where outdoor areas, including the public right-of-way, are regularly used for display and sales, or as dining areas, including areas under awnings which are used for dining and/or other commercial activities, the area so used shall be calculated as part of the establishment's total floor area and shall comply with offstreet parking requirements. Permit fees for sidewalk cafes shall be prescribed by section 54-111 of the Code of the City of Miami, and additionally, a payment in lieu of providing offstreet parking may be made as prescribed in section 35-194 of the Code of the City of Miami, and shall be paid into the Coconut Grove Parking Improvement Trust Fund as provided by Chapter 35, Article VIII of the Code of the City of Miami.
4. Shared parking facilities for which parking demand occurs at different times of the day may be permitted by special exception, but only upon a finding that the hours of operation for the proposed uses are not concurrent and that there is no negative impact on the surrounding areas, pursuant to Article 13 of this ordinance....
5. Where required offstreet parking is to be permitted to be located offsite, [location description], an agreement shall be required as in section 918.5 that the city is to be notified...in advance of proposed termination of the commitment of parking spaces. Alternatively, a payment in lieu of providing required offstreet parking may be made, subject to the approval by the planning director, according to the provisions of section 602.12....

Sec. 605.10. Offstreet parking and loading.

It is intended that automobile traffic in this district because of its close proximity to the rapid transit stations. Offstreet parking and loading and offsite parking shall be as required in sections 917, 918, 922 and 923, except as modified below:

605.10.1. Minimum and maximum offstreet parking limitations.

1. For residential uses, there shall be a minimum of one (1) parking space and a maximum of two (2) parking spaces per dwelling unit.
2. For hotel or motel use, there shall be a minimum of one (1) parking space for every four (4) lodging units and a maximum of two (2) parking spaces for every three (3) lodging units.
3. For business and professional office uses, including medical clinics, there shall be a minimum of one (1) parking space per eight hundred (800) square feet of floor area and a maximum of one (1) parking space per five hundred (500) square feet of floor area.
4. For retail and service uses, there shall be a minimum of one (1) parking space per one thousand (1,000) square feet of floor area and a maximum of one (1) parking space per three hundred (300) square feet of floor area.
5. For restaurants, bars, nightclubs and the like, there shall be no minimum number of parking spaces required, and there shall be a maximum of one (1) parking space per one hundred (100) square feet of floor area.
6. For theater uses, there shall be no minimum number of parking spaces required, and there shall be a maximum of one (1) parking space per four (4) seats.
7. For all other uses, there shall be a minimum of one (1) parking space per one thousand (1,000) square feet of floor area, and a maximum of one (1) space per five hundred (500) square feet of floor area.

605.10.3. Special offsite parking regulations.

Notwithstanding the limitations of section 918, offsite parking shall be permitted within the boundaries of the district by Class II Special Permit without limitation on percentage of the required number of spaces or maximum distance from the principal use. Furthermore, there shall be no required demonstration or findings of practical difficulty or unnecessary hardship in providing required parking on the site, provided that the location of the offsite parking is within

a one thousand (1,000) feet radius of the principal use, or within six hundred (600) feet radius of a Metrorail or Metromover station or there are permanent provisions made to transfer the offsite parking patrons to and from the principal site at the property owner's expense.

Sec. 610.4. Special rules concerning computation of parking requirements.

All parking requirements within the district shall be governed exclusively by the standard ratio of one (1) parking space for each six hundred (600) square feet of construction regardless of type of use. All parking spaces available throughout the district shall be counted towards satisfaction of the parking requirements attendant to all permits.

The computation of parking requirements for new permits shall be calculated as follows: The floor area of all buildings presently within the district shall be added to that of the proposed structure. The one (1) to six hundred (600) parking ratio shall be applied to the resulting figure to obtain the total number of parking spaces required within the district. To obtain the number of parking spaces that must be provided in connection with the new structure, the total number of parking spaces existing within the district shall be deducted from the total number of required spaces; provided that bus, taxi, and vehicular parking spaces in the public right-of-way within the district shall not be included in the total number.

Sec. 611. SD-11 Coconut Grove Rapid Transit District.

Sec. 611.10. Minimum offstreet parking.

Minimum offstreet parking requirements shall be as for C-1. In addition, the following provisions or limitations shall apply:

1. Any pedestrian open space or overpass square footage provided under section 611.7.1 shall not be counted for purposes of computing offstreet requirements.
2. In the event a pedestrian overpass conforming to the requirements of 611.7.1, paragraph 1, is provided, the minimum nonresidential parking requirements shall be one (1) per five hundred fifty (550) square feet of floor area.
3. Onsite parking for office uses may be credited toward required parking for movie theaters or performing arts theaters; provided, however, that the hours of operation of such theaters shall not coincide with normal weekday business hours.

Sec. 617. SD-17 South Bayshore Drive Overlay District.

Sec. 617.2. Effect of SD-17 district designation.

The effects of these SD-17 regulations shall be to modify regulations within portions of other zoning districts included within the SD boundaries to the extent indicated herein.

617.2.2. Exceptions to floor area ratio limitations.

Notwithstanding floor area ratio limitations of the existing districts, the F.A.R. for the area [location description]. The floor area ratio may be increased only for nonresidential buildings in the area [location description] in accordance with the following provisions:

617.2.2.1. Publicly accessible parking.

For every nonresidential parking space provided in excess of offstreet parking requirements, an additional two hundred (200) square feet of floor area for any use permitted in the underlying zoning district shall be permitted; provided, however:

- (a) Such parking space shall not be less than seventy-five (75) spaces and accessible by the general public during normal business and operating hours of public activities or attractions in Dinner Key adjacent public facilities or the Coconut Grove Village Center.
- (b) Parking fees charged shall not be in excess of prevailing rates for public metered parking in the vicinity, as established by the Miami Department of OffStreet Parking.
- (c) The entrance to the excess parking facility shall not be further than [location description]...

Sec. 617.5. Payment in lieu of required offstreet parking.

1. Upon application to the planning director, the owner of a property for which offstreet parking is required, but which parking the owner is unable to provide onsite, may request a waiver of any or all of the required spaces by substituting the payment of a fee per space in lieu of providing the required parking spaces.
2. If the waiver of required offstreet parking is approved by the planning director, the applicant shall pay the required fee to the department of offstreet parking for deposit in a special fund entitled "Coconut Grove Parking Improvement Trust Fund" pursuant to the provisions of Chapter 35, Article VIII of the Code of the City of Miami.

3. Payment of the required fee per space may be made in the form of a one-time payment of a fixed amount, or in the form of monthly payments for so long as the offstreet parking waiver is in effect.
4. Fees for the parking waiver shall be as established by Chapter 35, Article VIII of the Code of the City of Miami, and shall be posted on the schedule of fees by the planning, building and zoning department.
5. If the owner of a property applies for and is granted the right to substitute a fee in lieu of parking as provided for in this subsection, payment must be made in advance of issuance of a Certificate of Occupancy or Certificate of Use, as applicable. If the applicant already holds a valid Certificate of Occupancy or Certificate of Use, payment shall be made within thirty (30) days of approval of the requested waiver. Failure to make the required payment shall cause the Certificate of Occupancy or Certificate of Use to be revoked.

Sec. 919. Limitations on parking garages as principal use.

The floor area of a parking garage, when it is a principal use, shall not exceed the floor area limitations established for nonresidential uses within the district. Where there are incidental principal uses within such parking garages, the floor area of such uses shall not exceed twenty (20) percent of the floor area of the parking garage.

DIVISION 3. DEVELOPMENT REGULATIONS

Sec. 14-71. Transportation control measures.

- (A) *General requirements.* The following requirements shall apply to all development except renovation of existing structures or land improvements; changes of use or intensity of use of an existing structure or land improvement; when such change generates a net increase of less than fifty (50) peak-hour vehicle trips over the vehicle trip generation of the previous use or intensity; new structures or additions to existing structures of less than ten thousand (10,000) square feet; excavation; demolition; or deposit of fill. Development not excluded above shall:
 - (1) Actively encourage all employees within the development to participate in carpool or vanpools...
 - (2) Establish and maintain current local and regional mass transit route and schedule information...

- (3) Encourage mass transit use by the provision of bus shelters, [etc.]...
 - (4) Encourage mass transit use through the purchase of transit passes from Metropolitan Dade County, and making them available to building tenants and/or employees at a discounted price or at no charge, or in lieu of employer-subsidized employee parking.
 - (5) Reduce peak-hour trip generation through scheduling, where practical, staggered work hours for employees.
- (B) *Parking requirements.* The following parking requirements shall apply to all development except: renovation of existing structures or land improvements; changes of use or intensity of use of an existing structure or land improvement; when such change generates a net increase of less than fifty (50) peak-hour vehicle trips over the vehicle trip generation of the previous use or intensity; new structures or additions to existing structures of less than ten thousand (10,000) square feet; excavation; demolition; or deposit of fill. Development not excluded above shall comply as follows:
- (1) Parking shall be provided by the development in accordance with the applicable provisions of the city's zoning regulations, but in no case shall parking be provided in excess of the following amounts:

MAXIMUM PARKING SPACES PERMITTED BY TYPE OF USE

<i>Use</i>	<i>Maximum Parking</i>
Residential	2 spaces per dwelling unit
Retail	1 space per 300 sq. ft. GFA [Gross Floor Area]
Hotel/motel	1.5 spaces per room
Restaurant	1 space per 100 sq. ft. GFA
Office/other	1 space per 600 sq. ft. GFA in the CBD-1 zoning district and 1 space per 400 sq. ft. GFA elsewhere

- (2) Of the total parking provided, the number of spaces that can be placed on-site may be constrained by the city due to street capacity and/or air quality requirements.
- (3) The minimum number of required parking spaces shall be in accordance with the applicable provisions of the city's zoning regulations. For office uses only, there shall be no minimum number of spaces required to be on-site; all parking may be located off-site in a location approved by the city. If less than the minimum number of required spaces is permitted on-site, then:

- (a) The developer shall execute a permanent agreement to purchase transit passes in lieu of providing parking spaces, in an amount equal to two (2) transit passes per each required parking space that is not provided; or
 - (b) The developer shall make a one-time payment equal to the current "gap-financing" cost for each space as established by the city's department of off-street parking and enter into an agreement with the department of off-street parking to lease the spaces once built; or
 - (c) The developer shall own or lease the off-site spaces elsewhere in a location approved by the city. "Elsewhere" is defined as being one (1) or a combination of the following locations:
 - 1. A peripheral downtown location near expressway and/or arterial street entrance to downtown and within a maximum of six hundred (600) feet walking distance to a Metrorail or Metromover station or, if more than six hundred (600) feet walking distance from a Metrorail or Metromover station, connected by a parking shuttle system approved by the city.
 - 2. Any outlying location within a maximum of one thousand two hundred (1,200) feet walking distance to a Metrorail station or a designated Metrobus park/ride facility approved by the city.
- (C) *Air quality requirements.*
- (D) *Large scale development requirements.* In addition to the requirements of paragraphs (a) through (c) above, any development that requires a major use special permit pursuant to the provisions of the city's zoning regulations shall comply with these additional requirements:
- (1) Submit a transportation control measures (TCM) plan as a part of the application for a major use special permit...
 - (2) Each year following issuance of a certificate of occupancy, the development shall submit an annual report describing actual performance against the TCM plan objectives, an evaluation of such performance, and recommendations for modification to the TCM plan, if any.
- (E) *Special provisions.*
- (1) For special uses possessing unique characteristics that affect parking requirements, such as convention center, sports arena, stadium, auditorium, museum, theatre,

major league ballpark, and the like, parking requirements shall be calculated for each such use based on its special characteristics, hours and days of peak operation, location with respect to Metrorail, Metromover, and Metrobus services, peripheral and other existing parking, and similar unique characteristics that affect the quantity and location of necessary parking.

- (2) Parking as a principal permitted use may be permitted in such quantities and locations as determined by the city to be necessary to satisfy a measurable deficiency between the need for, and the supply of, parking spaces that cannot be reduced through rigorous application and enforcement of the transportation control measures contained herein.

City of Miami Beach Zoning Ordinance 89-2665
Section 7 PARKING REGULATIONS

7-1 GENERAL PROVISIONS AND PARKING DISTRICTS ESTABLISHED

For the purposes of establishing Off-Street Parking requirements, the City of Miami Beach shall be divided into two parking districts.

- A. Parking District No. 1 - Parking District No. 1 is that area not included in Parking District No. 2.
- B. Parking District No. 2 - [location description]
- C. There will be no Off-Street Parking requirement for Main or Accessory Uses associated with existing Buildings which are located within the Miami Beach Architectural District or a Local Historic District. This provision shall not apply to renovations and new additions to existing Buildings which create or add floor area and to new construction which has a parking requirement.

7-2 OFF-STREET PARKING REQUIRED

- A. Parking District No. 1 -
 - 1. Adult Booth, as defined in Section 12A of this Ordinance - 1 space per one Adult Booth.
 - 2. Adult Congregate Living Facility - 1 space per 2 beds.
 - 3. Alcoholic Beverage Establishment which permits Partial Nudity - 1 on-site space per 3 seats.
 - 4. Amusement Place, Video Arcade, Dance Hall, Skating Rink, Auditorium or Exhibition Hall without fixed seats - 1 space per sixty (60) feet of Floor Area available for seats, where there is no seating.
 - 5. Animal Hospital - 1 space per 400 square feet of Floor Area.
 - 6. Apartment Building and Apartment-Hotel or Hotel - 1-1/2 spaces per Apartment Unit and 1 space per Hotel Unit
 - 7. Auditorium, Ballroom, Convention Hall, Gymnasium, Meeting rooms or other similar places of assembly - 1 space per 4 seats or 1 space per 60 square feet of Floor Area available for seats.

8. Bar - 1 space per 4 seats and 1 space per 60 square feet of area not utilized for seating.
9. Bowling Alley or Pool Room - 1 space for each alley or per billiard or pool table.
10. Bus Station - 1 space per 60 square feet of Floor Area.
11. Cabana - 1 space per 2 Cabanas.
12. Cafe, Beachfront - shall have no parking requirement.
13. Cafe, Outdoor - 1 space per 4 seats.
14. Cafe, Sidewalk - shall have no parking requirement.
15. Church, Synagouge [sic] or Temple - 1 space per 6 seats or bench seating spaces in main auditorium.
16. College - 1 space per 5 seats in the main auditorium or 1 space per 3 seats per classroom, whichever is greater.
17. Dormitory - 1 space per two beds or 1 space per 150 square feet of Floor Area, whichever is greater.
18. Financial Institutions - 1 space per 300 square feet of Floor Area.
19. Funeral Home - 1 space per 6 seats or bench seating spaces in chambers and chapels.
20. Furniture Store, Hardware, Machinery, Equipment and Automobile and Boat sales and service - 1 space per 400 feet of Floor Area.
21. General service or repair establishment - printing, publishing, plumbing, heating, broadcasting - 1 space per 1,000 square feet of Floor Area.
22. Grocery Stores, Supermarket - fresh fruit, fish, meat, poultry - 1 space per 250 square feet of Floor Area.
23. High School - 1 space per 12 seats in the main auditorium or 1 space per 6 seats in a classroom, whichever is greater.
24. "HD" Hospital Districts - The following parking regulations shall apply to Structures situated in the "HD" Hospital District:

The number of Off-Street Parking Spaces required for any Structure shall be determined by the primary Use of the Structure in accordance with the requirements as follows:

- a. Hospital - 1-1/2 spaces per Hospital bed.
 - b. Educational facility - 1 space per 5 seats in the main auditorium or 1 space per 3 seats per classroom, whichever is greater.
 - c. Offices and Clinics as identified in Section 6-13 B.2 g and h - 1 space per 400 square feet of Floor Area.
 - d. Hospital staff offices as identified in Section 6-13 B.2.i - 1 space per 350 square feet of Floor Area.
 - e. Research facility - 1 space per 1,000 square feet of Floor Area.
 - f. When not listed above, the parking requirement for Uses listed in this Section shall apply.
25. Hotel, Convention - For structures [sic] of less than 250 units, 1 space per Unit; for structures with 250-499 units, 0.75 space per unit; for structures with 500 units or more, 0.50 space per unit. Required parking for Convention Hotel Accessory Uses shall be as follows:
- a. Retail - Required parking shall be computed at 1 space per 500 sq.ft., minus 7.5 sq.ft. per unit.
 - b. Auditorium, Ballroom, Convention Hall, Gymnasium, Meeting Rooms or other similar places of assembly - Required parking shall be 1 space per 7 seats or 1 space per 105 sq.ft. of floor area where there is no seating, minus 1 seat or 15 sq.ft. per unit.
 - c. Restaurant or other establishment for consumption of food or beverages on the premises - Required parking shall be 1 space per 7 seats or 1 space per 105 sq.ft. of floor area where there is no seating, minus 1 seat or 15 sq.ft. per 2 units.
 - d. Required parking for all other uses shall be as set forth in this Subsection.

The Zoning Board of Adjustment may grant a variance for the total amount of parking required for a hotel and related accessory uses by up to 10%.

26. Hotel, Motel or Motor Lodge - 1 space per Unit. Required parking for hotel accessory uses shall be as follows:
- a. Retail - Required parking shall be computed at 1 space per 400 sq.ft. minus 7.5 sq.ft. per unit.
 - b. Auditorium, Ballroom, Convention Hall, Gymnasium, Meeting Rooms or other similar places of assembly - Required parking shall be 1 space per 4 seats or 1 space per 60 sq.ft. of floor area where there is no seating, minus 1 seat or 15 sq.ft. per unit.
 - c. Restaurant or other establishment for consumption of food or beverages on the premises - Required parking shall be 1 space per 4 seats minus 1 seat for every 2 units.
 - d. Required parking for all other uses shall be as set forth in this Subsection.

These parking requirements for hotel accessory uses are only applicable to structures that are being newly constructed or substantially rehabilitated as hotels.

The Zoning Board of Adjustment may grant a variance for the total amount of parking required for a hotel and related accessory uses by up to 20%.

- 27. Junior High, Elementary or Nursery School - 1 space per 15 seats in main assembly room plus 1 space per classroom
- 28. Laundry - 1 space per 500 square feet of Floor Area.
- 29. Major Cultural Dormitory Facility - One (1) space per Unit.
- 30. Manufacturing or Industrial Establishment, Research or Testing Laboratory, Creamery, Bottling Plant, Wholesale, Warehouse or similar establishment - 1 space per 1,000 square feet of Floor Area.
- 31. Marina - 1 space per two wet slips; 1 space per 10 slips in dry dock storage facility.
- 32. Nightclub - 1 space per 4 seats and 1 space per 60 square feet of area not utilized for seating.
- 33. Nursing Homes - 1 space for each 2 beds.

34. Office or Office Building - 1 space per 400 square feet of Floor Area, however, medical offices and Clinics shall provide 1 space per 300 square feet.
35. Private Clubs, Country Clubs, Fraternities, Sororities and Lodges - 1 space per 250 square feet of Floor Area.
36. Restaurants or other establishments for consumption of food or beverages on the Premises - 1 space per 4 seats; take out Restaurant with no seats - 1 space per 300 square feet of Floor Area; take out Restaurant and home delivery with no seats - 1 space per 200 square feet of Floor Area. Parking requirements for Restaurants offering a combination of services shall be cumulative. Restaurants that have an Occupational License for a Nightclub or Bar shall meet the parking requirements indicated for those Uses.
37. Retail Store, Coin Laundry, Dry Cleaning Receiving Station, Stock Brokerage or Personal Service Establishment - 1 space per 300 square feet of Floor Area.
38. Rooming, Boarding or Lodging House - 1 space per Hotel Unit plus 2 spaces for the Building.
39. Single-Family detached dwelling - 2 spaces.
40. Shopping Center - 1 space per 300 sq. ft.; however, the parking requirements for eating and drinking Uses shall be as established under 7-2.A.32 above.
41. Theatre - 1 space per 4 seats.
42. Telephone Exchanges or Equipment Buildings - 1 space per 1,500 square feet of Floor Area.
43. Townhouse - 2 spaces for each unit plus 1 designated guest space per 5 units.

B. Parking District No. 2

There shall be no Off-Street Parking requirement for Uses in this Parking District except for those listed below:

1. Apartment Building and Apartment-Hotel - 1-1/2 spaces for each unit regardless of size or number of bedrooms.

The parking requirement may be satisfied by entering into a Development Agreement with the City to provide for said parking through the construction of facilities over City owned properties (air rights) or by providing for Off-Site Parking facilities in accordance with Section 7-3 of this Ordinance.

2. Adult Congregate Living Facility - 1 space for every 2 beds.
 3. Offices - 1 space per 400 square feet of Floor Area.
 4. Theatres - No requirements for the first 600 seats; one (1) space for every additional eight (8) seats. The parking requirements for this use may not be satisfied through the Parking Impact Fee Program as stated in Subsection 7-7 of this Ordinance.
 5. Religious Institutions, Schools, Nursing Homes - As per Section 7-2.A.
- C. Zoning Districts exempted from Providing Parking - There shall be no required parking for any Use located in the Dune Overlay District or Waterway District 1.

7-3 OFF-SITE FACILITIES.

7-4 INTERPRETATION OF OFF-STREET PARKING REQUIREMENTS

- A. The parking required herein is in addition to space for storage of trucks or other vehicles used in connection with a business, Commercial, or industrial Use.
- C. The parking space requirements for a Use not specifically listed in this Section shall be the same as for a listed Use which generates a similar level of parking demand.
- D. In the case of mixed Uses, Uses with different parking requirements occupying the same Building or Premises, the parking spaces required shall equal the sum of the requirements of the various Uses computed separately, except when the amount of parking spaces is computed under the Shared Parking provisions as set forth in Section 7-10.
- F. Whenever a proposed Use does not indicate the specific number of Persons to occupy such area, the required parking shall be computed on the basis of one Person per 15 square feet of Floor Area, the parking requirement shall then be calculated as listed in Section 7-2.
- G. Handicapped parking facilities shall be provided as required by the South Florida Building Code. These spaces shall be included within the amount of parking that is required under this Ordinance.
- H. For non-residential Uses, the parking calculation shall be the gross Floor Area of the Building.

7-5 DESIGN STANDARDS.

- A. Minimum Area. ...a standard Off-Street Parking Space...having a width of not less than eight and one half (8 1/2) feet and a length of not less than eighteen (18) feet...
- B. For Hotels, Apartment Buildings and eating and drinking establishments which are within a Redevelopment Area or within nationally or locally designated Historic Districts or Hotels having more than 200 units, the required parking may be provided on a valet basis in at-Grade Lots or parking Structures. the valet space shall be eight (8) feet by sixteen (16) feet...
- H. Temporary Parking Lot Standards. When permitted, the following standards are established for Temporary Parking Lots:
 - 1. Temporary Commercial or non-commercial Parking Lots may be operated in the MR Marine District, GU Government Use District, MXE or C- PS 1-4 Districts. These Lots may be operated independent of a primary Use. Temporary, non-commercial Lots may be located in the R-PS1-4 and in any multi-family residential district or within the Architectural District as defined in Section 3-2,A of this Ordinance.
 - 3. Should the City Manager find that the operation of a Temporary Parking Lot has an adverse effect on the welfare of surrounding properties, he may revoke the license pursuant to the procedures set forth in Section 20-27 of the Miami Beach City Code...
 - 4. Use of Temporary Parking Lots shall not be for parking which is required by the Zoning Ordinance.

7-6 OFF-STREET LOADING SPACE REQUIREMENTS

7-7 PARKING IMPACT FEE PROGRAM

Where there is inadequate area available on-Site, or at a location within 1200 feet of the Site, for providing some or all of the parking spaces required by this Ordinance for a given Use, the parking requirement may be fulfilled by payment of an impact fee instead, as provided herein.

In no instance shall the substitution of an impact fee result in the construction of a new residential Development which provides less than one (1) parking space per unit and any other type of new construction development which provides less than fifty percent (50%) of the required parking.

New construction of commercial development and Residential additions to existing buildings whether attached or detached from the main structure within the Miami Beach Architectural District or a Local Historic District may fully satisfy the parking requirement by participation in the Parking Impact Fee Program pursuant to Subsection 7-7, A.1 below.

A. Fee Calculation.

1. New Construction - The impact fee shall be satisfied by a one-time payment at the time of issuance of a Building Permit of \$10,000 assessed as follows:

<u>% of Fee per space</u>	<u>No. of Required spaces not provided</u>
a. 59%	0-69 spaces
b. 60%	70-89 spaces
c. 70%	90-109 spaces
d. 80%	110-129 spaces
e. 90%	130-149 spaces
f. 100%	150 or more spaces

The amount of said fee may be changed in accordance with Section 7-7 A.4.

2. Existing Structures - When alteration or rehabilitation of a Structure, results in an increased parking demand, regardless of the value of the work, the impact fee shall be satisfied by one of the following:
 - a. A one time payment as set forth in Subsection 7-7,A.1 above, or
 - b. A yearly payment in the amount of 6% of the payment required by Subsection 7-7,A.1 which shall continue as long as the Use exists. (The amount of said payment may vary from year to year in accordance with the determination set forth in Subsection 7-7,A.4.) However, in lieu of continued yearly payments, a one-time redemption payment may be made at any time of the full amount due pursuant to Subsection 7-7,A.1; said amount shall be based upon the latest determination made pursuant to Subsection 7-7,A.4. as of the time of the redemption payment rather than upon the amount which would have been due if the fee had been paid at the time the work was done, regardless of the number of yearly payments made previously. However, when New Floor Area is added to the existing Building, the impact fee shall be as set forth in Section 7-7, A-1 above.
3. Removal of existing parking spaces - Whenever an existing required parking space is removed or eliminated for any Building [describes parameters]...a parking

impact fee shall be required if a replacement parking space is not provided on site or within 1,200 feet of the site. Said fee shall be satisfied as set forth in Subsection 7-7, A.2 above.

4. The amount determined to be the City's total average cost for land acquisition and construction of one parking space shall be evaluated yearly by the Planning and Zoning Director based upon City of Miami Beach average real estate sale prices and the U.S. Department of Commerce Construction Price Index for South Florida. If determined necessary, the fee structure shall be amended in accordance with Section 14, Changes and Amendments of this Ordinance.

B. Fee Collection.

1. New Construction - one time payment.
2. Existing Structures and which elect yearly payment plan -
3. Existing structures - one time redemption payment-
4. Late payments -
5. Failure to pay -

C. Funds generated by the Impact Fee Program shall be deposited in a City account specifically established to provide parking and related Improvements in the vicinity of the subject property. The Planning and Zoning Director shall maintain a map which includes a listing of the districts and accounts.

D. The required number of parking spaces may be provided in a facility developed through a joint venture agreement with the City or by a private entity in which the required number of parking spaces in a parking facility is specifically reserved for Use by the Applicant. Agreements regulating privately owned parking facilities shall be approved by the City Attorney, those relating to City owned property shall be approved by the City Commission. All agreements pursuant to this subsection shall be recorded in the public records of Dade County.

E. No variances shall be granted from the requirements of this Section.

7-8 PARKING CREDIT SYSTEM

- A. Whenever a Building or Use that was established prior to October 1, 1989, is changed in a manner that results in an increase in the number of required Parking spaces, the following regulations shall apply.
- 1. Any Building or Use that lawfully existed on October 1, 1989, shall receive a parking space credit equal to the number of parking spaces required prior to the adoption of this Ordinance. The parking credit shall run with the land and shall be applied toward the required Parking as follows:
 - a. The Parking credit shall only be applied to the area within the existing shell of the Building.
 - b. Parking credits shall not be applicable to Buildings or portions of a Building that have been demolished.
 - c. Parking credits in the MXE Mixed Use Entertainment District shall only be applied as of November 5, 1990. Parking credits in the Redevelopment Area shall only be applied as of (the effective date of Ordinance). Any existing Use in the MXE Mixed Use Entertainment District or Redevelopment Area which has satisfied the parking requirement through participation in the Parking Impact Fee Program may have its Parking Impact Fee adjusted for parking credits at the next due date for payment. No reimbursement or prorating shall be allowed.

7-9 SURPLUS AND UNDER-UTILIZED PARKING SPACES

A. Surplus Parking Spaces

When a Development contains parking spaces in excess of the number required by this Ordinance, such spaces shall be considered surplus parking. These surplus spaces may be leased to another property for Use as required Parking spaces, if the surplus spaces are within 1200 ft. of the Development leasing such spaces.

B. Under-utilized Parking Spaces

When a Building or Development contains required parking spaces that are being under-utilized, such spaces may be leased to another party. However such spaces shall not be considered as required Parking spaces of the lessee. In order to determine if a Development has under-utilized spaces,

the Applicant shall submit an annual report to the Planning and

Zoning Director substantiating this finding. The Director shall approve or deny the report based upon the report of the City department verifying the results of the annual report.

7-10 SHARED PARKING

Two or more Uses shall be permitted to share the same required Off-Street Parking Spaces in a common parking facility on the same Lot if the hours or days of peak parking for the Uses are so different that a lower total will provide an adequate number of spaces for all Uses served by the facility, according to the following table.

	WEEKDAYS		WEEKENDS		
	Daytime (6AM-6PM)	Evening (6PM-6AM)	Daytime (6AM-6PM)	Evening (6PM - midnight)	Nighttime (midnight - 6AM)
Office or Banks	100%	5%	10%	5%	5%
Retail	60%	20%	80%	60%	5%
Hotels	50%	60%	60%	100%	75%
Restaurant	50%	75%	75%	90%	10%
Theater	10%	70%	20%	90%	10%
Nightclubs	5%	50%	5%	100%	90%
Other Uses	100%	100%	100%	100%	100%

a. Method of calculation -

Step 1 -- For each of the five time periods, multiply the minimum number of parking spaces required by Section 7-2, Parking Regulations.

Step 2 -- Add the results of each column. The required number of parking spaces shall equal the highest sum total.

b. The land uses served by the shared parking facility shall be in single ownership or unity of title or long term lease.

7-11 VALET PARKING

Required parking for new or substantially renovated Hotel Buildings, Hotel Accessory Uses, Nightclubs or Restaurants in excess of 200 seats may be satisfied through the provisions of valet parking spaces (See Section 7-5,B for design Standards). Multi-Family Buildings may provide up to but not more than one half of the required spaces as valet parking spaces.

7-12 SUPPLEMENTARY CONVENTION CENTER PARKING

A. Whenever the City Manager determines that there is inadequate available parking to accommodate anticipated parking needs for a particular event scheduled for the City's Convention Center, the City Manager shall authorize the issuance of Supplementary Convention Center Parking permits allowing the operation of vacant lots in the RM-1, RM-2, CD-1, CD-2 and CD-3 Zoning Districts located within 2500 feet of the Convention Center as Commercial Parking Lots for the duration of a particular event.

B. Occupational license required - permitting process.

C. All vacant Lots utilized for supplementary convention center parking pursuant to this subsection shall comply with the following standards: [not included here]

D. No Lots shall receive more than 6 Supplementary Convention Center Parking Permits per year.

E. Supplementary Convention center parking permits shall not be issued for parking spaces which currently constitute required parking for some other Use.

F. If the City Manager finds that the operation of a Lot for Supplementary Convention Center Parking has an adverse effect on the welfare of surrounding properties, the Occupational License may be revoked pursuant to the procedures set forth in Article II of Chapter 20 of the Miami beach City Code.

Miami Shores Village Zoning Code

Off-Street Parking Space - Off-Street Loading Space

For dwellings:

Minimum: One space for each plot, enclosed or open.

Location:

Materials, area: Concrete, asphalt and/or masonry products, specifically not to include any loose material such as gravel or mulch; permitting no more than 2 spaces of a maximum size of 10 ft. x 25 ft. each.

Churches: One parking space for each 4 seats plus one parking space for each 50 square feet of floor area in assembly rooms with movable seats, provided that these requirements shall apply only to auditoriums and chapels and not to rooms used only for Sunday School classes.

Junior high, elementary schools, public, private or parochial schools: One parking space for each classroom plus 1/4 of the additional parking spaces otherwise required by this section for auditoriums.

Senior high schools public or private: One parking space for each classroom plus one parking space for each 10 students or 1/2 of the additional parking spaces otherwise required by this section for auditoriums, whichever is greater.

Business, vocational and trade schools: One parking space for each 100 square feet of gross floor area in the building.

Other uses: For any use not specifically mentioned, the requirements for off-street parking shall be equivalent to the requirements for a use which is herein expressly set forth and is similar to the actual use.

City of Miami Springs Land Use Zoning Code

Section 150.016 OFF-STREET PARKING FACILITIES; PAVING AND DRAINAGE; LIGHTING; LANDSCAPING; AND MINIMUM NUMBER OF OFF-STREET PARKING SPACES; OFF-STREET PARKING REQUIREMENTS FOR SINGLE-FAMILY RESIDENTIAL AND DUPLEX ZONING DISTRICTS.

(A) General provisions...

- (1) The Building and Zoning Department and the Zoning Planning Board are charged with the responsibility of determining whether the off-street parking plan submitted complies with the spirit and intent of all parts of this section. The Zoning and Planning Board will give particular attention to the overall parking function, the landscaping, and the general aesthetics surrounding the development of the site as a whole and make its recommendation to the City Council for final action as provided in Sec. 150.101.

- (E) Minimum number of off-street parking spaces. All uses within the city shall be subject to the following requirements for minimum number of off-street parking spaces. Off-street parking space requirements for those uses not specifically enumerated herein, but which are closely related and similar to the uses listed below, shall be determined in accordance with the requirements for listed similar uses. All fractional number of spaces required shall be rounded off to the next highest space number. Any dispute regarding the number of off-street parking spaces required for any use shall be finally determined at an appropriate hearing before and by the City Council.

- (1) Multiple-family residential dwellings and townhouses: Two and one fourth spaces for each dwelling unit.
- (2) Retail and personal service uses: One space for each 300 square feet of gross floor area, with a minimum of three per establishment.
- (3) Medical offices: One space for each 200 square feet of gross floor area, with a minimum of three per establishment.
- (4) Offices (other than medical)[sic]: One space for each 300 square feet of gross floor area, with a minimum of three per establishment or partitioned floor space intended for a single tenant or owner-occupant.
- (5) Bars and restaurants, meeting and banquet halls, civic and fraternal organization facilities, places of religious observance and similar places of public assembly: One space per 100 square feet of gross floor area.

- (6) Hotels and motels; hospitals: One space for each room or suite up to 20, and one space for every two rooms or suites in excess of 20, provided that parking for each accessory use to hotels and motels, such as bars and restaurants, shops, meeting rooms and the like are to be computed separately and added to the total required for rooms and duties.
- (7) Mixed-use buildings: The combined minimum number of off-street spaces required for mixed-use buildings shall be determined by computing separately and adding together the requirements for the individual uses.
- (F) Off-street parking requirements for single-family residential and duplex zoning districts.
- (1) Minimum number of required off-street parking spaces for single-family homes and duplexes.
 - (a) Two off-street parking spaces are required for each single-family home with two bedrooms or less.
 - (b) Two off-street parking spaces are required for each dwelling unit in a duplex when the dwelling units therein contain two bedrooms or less.
 - (c) Any single-family home or dwelling unit contained in a duplex with three or more bedrooms shall require three off-street parking spaces.
 - (d) If the construction of an addition to a single-family home or portion of a duplex increases the number of bedrooms from zero, one or two to three or more, then one additional off-street parking space shall be required.

City of North Bay Village Code
OFF-STREET PARKING AND LOADING FACILITIES

Section 152.040 Purpose and intent.

It is the purpose and intent of this subchapter to establish minimum space and design requirements for off-street parking...to accommodate both public and private uses. The ever-increasing number of vehicles generated from and attracted to residential, commercial and public activities requires that adequate parking...facilities, which permit safe and efficient vehicle and pedestrian movement, be provided in order to protect the health, safety and welfare of the residents of the city.

Section 152.041 Off-street parking requirements.

(A) *General requirements:*

- (1) Every use or structure shall provide off-street parking facilities for the use of occupants, employees, visitors or patrons. The provision of off-street parking spaces in conjunction with all land or building uses shall be completed prior to the issuance of a certificate of occupancy and such parking facilities shall be maintained as long as the use is continued.
- (2) No owner or operator of any use or structure shall discontinue or cause a discontinuance or reduction in required off-street parking facilities required by the applicable code provisions existing at the time of construction, use or occupancy without establishing alternate parking facilities which meet the requirements of this subchapter.

(B) *Joint use of facilities:*

- (1) All parking spaces required herein shall be located on the same parcel with the building or use served, except that where an increase in the number of spaces are provided collectively or used jointly by two (2) or more buildings or establishments, the required spaces may be located and maintained not to exceed three hundred (300) feet from the use being served.
- (2) Up to fifty (50) percent of the parking spaces required for theaters, auditoriums and nightclubs, and up to one hundred (100) percent of the parking spaces required for churches may be provided and used jointly by banks, offices, retail stores, repair shops, service establishments and similar uses not normally open, used or operated during the same hours as theaters, auditoriums, nightclubs or churches; however, a written agreement thereto shall be properly executed and filed...

Section 152.042 Design standards.

- (E) *Compact spaces permitted.* Upon special approval by the City Commission in accordance with the provisions on use exceptions, up to twenty (20) percent of all required parking spaces may be designed specifically for small vehicles of the compact or foreign type, provided such spaces are clearly marked "for compact cars only" and collectively located in a defined area.
- (F) *Space dimensions.* Required and permitted off-street parking spaces shall...have the following minimum dimensions:

<i>Type of Space</i>	<i>Length</i>	<i>Width</i>
Standard	20	10
Handicapped	20	13
Compact	16	8

- (Q) *Reduction of parking space dimensions.* Upon special approval by the City Commission, parking stall spaces may be reduced in size to nine (9) by twenty (20) feet. In such instances, there shall be clearcut demonstration that the reduction of stall space size serves the purpose of these regulations to relieve congestion in the streets, and that a reduction of size and stall space does not thereby increase the permitted density or maximum number of units of commercially used space and/or dwelling units on the property.

Section 152.044 Minimum space requirements.

All uses shall be subject to the following minimum space requirements unless additional spaces may be required as the condition for securing a permitted conditional use...

(A) *Residential uses:*

- (1) Single family: Two (2) spaces for each dwelling unit.
- (2) Multifamily: One and five-tenths (1.5) spaces for each efficiency unit, one and seventy-five hundredths (1.75) spaces for each one-bedroom unit and two (2) spaces for each two-bedroom unit or larger, plus an additional ten (10) percent of the total number of required spaces for guest parking which shall be identified as such.
- (3) Hotels, motels, and other tourist accommodations: one (1) space for each rental sleeping unit, plus an additional ten (10) percent of the total number of required spaces.

(B) *Commercial uses.*

- (1) Banks and financial institutions: one (1) space for each three hundred (300) feet of gross floor area, plus sufficient area for eight stacking spaces for each drive-thru window...
- (2) Business, vocational, and trade schools: One (1) space for each one hundred (100) square feet of gross floor area.
- (3) Lodges, fraternal organizations, and union halls: one space for each one hundred (100) square feet of gross floor area.
- (4) Offices (business, professional, medical, dental, or clinic): one space for each three hundred (300) square feet of gross floor area.
- (5) Personal service establishments (dry cleaners, laundromats, exercise studios, and other similar uses): one (1) space for each two hundred (200) square feet of gross floor area.
- (6) Repair service establishments (shoes, watches, appliances, and other similar uses): one (1) space for each two hundred (200) square feet of gross floor area.
- (7) Restaurants, lounges, and night clubs: one (1) space for each seventy-five (75) square feet of gross floor area.
- (8) Retail sales establishments: one (1) space for each two hundred (200) square feet of gross floor area, plus sufficient area for four stacking spaces for every drive-thru window...
- (9) Service stations: three spaces, plus three spaces for every service bay.
- (10) Theaters (motion picture): one space for each three seats or other accommodations provided.
- (11) Vehicle sales, rental, repair, and service operations: one (1) space for every four hundred (400) square feet of enclosed floor area for sales or rental display, plus two (2) spaces for each service bay.
- (12) Wholesale trade establishments: one (1) space for each three hundred (300) square feet of gross floor area.

(C) *Community facilities.*

- (1) Adult congregate living facilities: three-quarter (3/4) space per living unit.
- (2) Churches, synagogues, and other houses of worship: one (1) space for each four (4) seats in the principal assembly area.
- (3) Government offices and facilities: one (1) space for each three hundred (300) square feet of gross floor area, plus one (1) space for every four seats in any public assembly area.
- (4) Hospitals: one (1) space for each patient bed.
- (5) Marinas: one (1) space for every boat slip or berth, plus such additional spaces as may be required for permitted uses such as retail stores and restaurants.
- (6) Museums, art galleries, and libraries: one (1) space for every four hundred (400) square feet of gross floor area.
- (7) Nursing or convalescent home: one-half (1/2) space for each bed.
- (8) Tennis, handball, and racquetball facilities (indoor or outdoor): five (5) spaces for every court, plus such additional spaces as may be required for permitted uses such as retail stores and restaurants.

(D) *Supplemental requirements.*

- (1) Off-street parking requirements for those uses not enumerated but which are closely related and similar to the uses listed above shall be determined by the Planning and Zoning Board in accordance with the requirements for the listed similar use. Requirements for all nonsimilar uses shall be set by the City Commission after a recommendation by the Planning and Zoning Board.
- (2) For theaters, auditoriums, churches, or other places of public assembly in which occupants may utilize benches, pews, or other similar seating arrangements, each eighteen (18) lineal inches of such seating facilities shall be counted as one seat for the purpose of computing off-street parking requirements.

(E) *Exceptions to parking requirements.*

- (1) Off-street parking areas adjacent to or within a reasonable distance (the reasonableness of the distance to be determined by the City Commission) from the premises on which parking areas are required by the parking regulations of this subchapter, where practical difficulties or unnecessary hardships are encountered in locating such parking area on the premises and where the purpose of these regulations to relieve congestion in the streets would be best served by permitting such parking off the premises.
- (2) To waive or reduce the parking and loading requirements in any district whenever the character or use of the building is such as to make unnecessary the full provision of parking or loading facilities.

City of North Miami Code Appendix A - ZONING
Section 29-10. Off-street parking; general criteria.

- (a) *Off-street parking; general criteria.* In all districts in connection with every manufacturing business, institutional, recreational, residential or any other use, there shall be provided at the time any new building or structure is erected, off-street parking spaces open to the public in accordance with the requirements set forth herein.
 - (1) *Size and access.* Each off-street parking space shall have an area of not less than nine (9) feet width and eighteen (18) feet depth...
 - (2) *Number of parking spaces required.* The number of off-street parking spaces required shall be as set forth in the off-street parking schedule.
- (b) *Off-street parking schedule.*
 - (1) *Location.* Off-street parking areas shall be located on the same lot, parcel or premises as the use to be served or on a parcel of land within one hundred (100) feet, provided there is a unity of title between the parcel being served and the parcel on which such off-street parking is located.
 - (4) *Schedule.* Adult congregate living facility - One (1) parking space for every four (4) residents, and one (1) space per each employee on the largest shift.

Assembly and manufacturing plants - One (1) parking space per each three hundred (300) gross feet of office area, plus one (1) parking space for each three hundred (300) gross square feet of showroom or retail space, if any, plus one (1) parking space for each seven hundred fifty (750) square feet of remaining gross building area.

Assembly halls - See places of assembly.

Automobile repair, painting, top and body works - One (1) space per five hundred (500) square feet of gross building area.

Automobile, tractor and boat sales - One (1) parking space per each three hundred (300) gross square feet of office area, plus one (1) parking space for each six hundred (600) square feet of remaining gross building area.

Banks, savings and loans associations, credit unions et al - See business offices.

Bars, beer gardens, nightclubs - One (1) parking customer space for each fifty (50) square feet of floor area in rooms for customer service plus one (1) space for each employee on the largest shift.

Beauty and barber shops - One (1) parking space per each one hundred fifty (150) square feet of gross floor area, or any part thereof, and one (1) space per each employee on the largest shift.

Bottling plants - See assembly and manufacturing plants.
 Bowling alleys - Three (3) parking spaces for each alley, plus one (1) space for each employee on the largest shift.
 Builders supplies - See retail stores.
 Bus depots - See terminal facilities.
 Business, professional and governmental offices - One (1) parking space for each three hundred (300) square feet of gross floor area plus one (1) space for each vehicle used in connection with such use.
 Cabanas - See commercial bathing beaches.
 Charter, sightseeing or fishing boat docks - See terminal facilities et al.
 Chiropractic offices - See medical et al.
 Cinemas - See motion picture theaters.
 Circus grounds - See stadiums et al.
 Clinics - See medical et al.
 Colleges - See junior and senior high schools.
 Commercial bathing beaches, swimming pools, cabanas - One (1) parking space per employee plus one (1) parking space for each two (2) persons based upon the normal capacity of use.
 Contractors' plant storage and equipment areas - See assembly and manufacturing plants.
 Convalescent or nursing homes - See ACLF.
 Convention centers - One (1) parking space for each five (5) spectator seats, or one (1) parking space for each two hundred (200) square feet of gross floor area, whichever is greater.
 Dental clinics - See medical et al.
 Drive-in restaurants and drive-in establishments - One (1) space for each patron based upon total occupancy of facility or per automobile, based upon size of parking area, whichever is greater.
 Dry cleaning establishment - One (1) parking space per five hundred (500) square feet of gross floor area, or fraction thereof, plus one (1) parking space for each two (2) employees on the largest shift.
 Dry cleaning plants - see assembly and manufacturing plants.
 Elementary schools, public, private or parochial - One (1) parking space for each classroom plus one-half of the additional parking spaces for rooms used for public assembly as otherwise required by this section plus adequate space for bicycles and motorcycles.
 Equipment shops - See retail.
 Fairgrounds - See stadiums et al.
 Fast-food establishments - One (1) space for each employee on the largest shift plus one (1) space per four (4) seats based upon rated capacity for table service. In addition, parking space will be provided based upon one-half peak hourly capacity, minus space for table service, for take-out service.

Film studios - One (1) space for each employee on largest shift plus one (1) space per five hundred (500) square feet or fraction thereof of gross floor area.

Fishing boat docks - see terminal facilities et al.

Food products, processing, packing and storing - see assembly and manufacturing plants.

Freight stations - see terminal facilities.

Governmental offices - see business offices et al.

Guest cabins - See hotels et al.

Heliports - see terminal facilities.

High Schools - See junior and senior high schools.

Hospitals, sanatoria, convalescent homes, etc. - Two (2) parking spaces for each bed.

Hotels, motor hotels, motels, tourist homes, guest cabins, villas - One (1) parking space for each guest room, cabin or rental unit, plus one (1) parking space for each employee on the largest shift. Where there are other uses operated in conjunction with and/or as part of the hotel, additional off-street parking spaces shall be provided for such uses as would be required by this section if such uses were principal uses. This additional requirement need not exceed fifty (50) percent of the off-street parking specified in this section for retail stores, offices, service establishments, bars, restaurants, dining rooms, nightclubs, cabarets, ballrooms, banquet halls, meeting rooms, auditoriums.

House courts - See hotels et al.

Household repair shops - See retail stores et al.

Interior decoration shops - See retail stores et al.

Junior and senior high schools and colleges, public, private or parochial - One (1) parking space for each classroom plus one (1) parking space for each five (5) students, or one-half of the additional parking spaces for rooms used for public assembly as otherwise required by this section, whichever may be greater, plus adequate space for bicycles and motorcycles.

Medical, dental, veterinary, chiropractic, etc., clinics - One (1) parking space for each two hundred (200) square feet of gross floor area.

Metal fabricating shops - See assembly and manufacturing plants.

Mortuaries - One (1) parking space for each fifty (50) square feet of chapel and/or parlor area. Notwithstanding there shall be a minimum of thirty-five (35) parking spaces.

Motels - See hotels et al.

Motion picture theaters and theaters - One (1) parking space for each four (4) fixed seats.

Motor hotels - See hotels et al.

Museum - One (1) parking space for every three hundred (300) square feet of gross floor area devoted to office or retail space, plus one (1) space for every four (4) fixed seats in public assembly areas, plus one (1) space for every two hundred fifty (250) square feet of gross floor area for that public assembly space where no fixed seats are provided.

Nightclubs - See restaurants et al.

Personal service shops - See retail stores et al.

Planned shopping centers - Refer to specific requirements of this section for uses in shopping centers.

Printing and engraving and related reproductive services - One (1) parking space for each three hundred (300) square feet of gross building area.

Processing plants - See assembly and manufacturing plants.

Professional offices - See business offices et al.

Places of public assembly (including assembly halls, churches, exhibition halls, convention halls, dance halls, skating rinks, sports arenas, community centers, libraries, museums, private clubs, lodges, fraternal buildings, union halls) - One (1) parking space for each four (4) seats or one (1) parking space for each fifty (50) square feet of floor area for use without fixed seats.

Racetracks - see stadiums et al.

Radio or TV stations - One (1) parking space per each three hundred (300) gross square feet of office area, plus one (1) parking space for each seven hundred fifty (750) square feet of remaining building area.

Railroad stations - see terminal facilities.

Research laboratories - see medical laboratories.

Residential: Single-family - Two (2) spaces. Two-family - Five (5) spaces. Three-family - Seven (7) spaces. Multi-family - Two and one-half (2-1/2) spaces per dwelling unit. Townhouses - two and one-half (2-1/2) spaces per dwelling unit.

Restaurants - One (1) space for every four (4) seats.

Retail stores, personal service shops, interior decoration shops - One (1) parking space for each three hundred (300) square feet of gross floor area, plus one (1) space for each business vehicle used in conjunction with each use.

Sanatoria - See hospitals.

Service establishments - See drive-in restaurants.

Sightseeing boat docks - See terminal facilities.

Sound recording studios - One (1) space for each three hundred (300) square feet of gross floor area.

Stadiums, racetracks, fairgrounds, circus grounds - One (1) parking parking [sic] space for each four (4) seats.

Storage warehouses - One (1) parking space for each three hundred (300) gross square feet of office area, plus one (1) parking space for each one thousand (1,000) square feet of remaining gross building area.

Swimming pools - See commercial bathing beaches.

Terminal facilities, including heliports, railroad passenger and freight stations, bus depots; also charter, sightseeing or fishing boat docks - One (1) parking space for each two (2) employees, plus one (1) parking space for each four (4) persons of the normal capacity of use, and the public as customers, patrons and visitors.

Theaters - See motion picture theaters.

Tourist homes - See hotels et al.

Vehicles for hire - One (1) standard parking space for each vehicle for hire (stack parking permitted). One (1) standard parking space for every two (2) employees operating a vehicle for hire plus one (1) standard parking space for each three hundred (300) square feet of gross floor office space area associated with such use.

Veterinary clinics - See medical clinics et al.

Villas - see hotels et al.

Wholesale distributors - see assembly and manufacturing plants.

Other uses - The requirements for off-street parking for any uses not specifically mentioned in this section will be those requirements for the use most similar to the one sought, it being the intent to require all uses except agricultural to provide off-street parking.

Special or technical schools - See places of public assembly.

City of North Miami Beach Zoning Code
Article IX OFF-STREET PARKING AND LOADING

Sec.24-91 Purpose and Intent

It is the purpose and intent of this article to establish minimum space and design requirements for off-street parking...to serve all uses. Vehicles generated from and attracted to residential, commercial and public activities require adequate parking...facilities which permit safe and efficient vehicle and pedestrian movement, and are provided in order to protect the health, safety, and welfare of North Miami Beach.

Sec.24-92 Off-Street Parking Requirements

(B) *Joint and Shared Use Facilities*

Under no circumstances shall joint or shared use parking facilities be farther than five hundred (500) feet away from the buildings using these facilities.

- (1) *Joint usage:* Two (2) or more adjacent structures or uses under the same ownership or management may collectively provide their required off-street parking, provided that the total number of parking spaces provided shall not be less than the sum of the requirements for the several individual uses if computed separately...
- (2) *Shared usage:* Notwithstanding any other parking requirements set forth in this Article for individual land uses, when any land or building is used for two (2) or more distinguishable purposes (as listed in the Shared Parking Credit Table), the minimum total number of parking spaces required to serve the combination of all uses may be determined as follows:
 - (a) Multiply the minimum parking requirement for each individual land use (as set forth in the Off-Street Parking Requirement Table) by the appropriate percentage (as set forth in the Shared Parking Table) for each of the five (5) designated time periods.
 - (b) Sum all five (5) vertical columns. The column having the highest total value is the minimum shared parking space requirement for that combination of land uses.
 - (c) Recordable covenants, with correct legal descriptions, shall be submitted by the owners of the property and the businesses, in a form acceptable to the City Attorney, and those covenants shall be recorded by the City at the applicant's expense, and shall run with the land...

- (C) *Restrictions*
- (D) *Location of Parking*
- (E) *Single-Family/Two-Family Dwellings*
- (F) *Non-residential Driveways*

Sec.24-93 Parking Lot Design Standards

- (A) *Paving and Drainage*
- (B) *Traffic Control*
- (C) *Parking Requirements for the Handicapped*
- (D) *Space Dimensions*

Required and permitted off-street parking spaces shall have the following minimum dimensions:

<i>Type of Space</i>	<i>Length Feet</i>	<i>Width Feet</i>
Standard	18	9
Handicapped	20	12

- (E) *Space Markings*
- (F) *Wheel Stops*
- (G) *Illumination*
- (H) *Landscaping*
- (I) *Right-of-Way Setback*
- (J) *Parking Facility Design Standards*
- (K) *Back-Out Parking Prohibited*

Sec.24-94 Site Plan Review Requirements

(A) Whenever site plan review is otherwise required in conjunction with a specific use, that review shall satisfy the requirements of this section. Site plans shall include the following:

- (1) All off-street parking facilities shall be designed with consideration given to surrounding street patterns, adjacent properties, and other neighborhood improvements. Consideration shall be given to the number of vehicles to be accommodated, hours of operation, and types of uses served.

Sec.24-95 Minimum Space Requirements

All uses shall be subject to the following minimum space requirements unless additional spaces may be required as a condition for securing a permitted conditional use. All fractional space requirements shall be rounded off to the next highest number. For uses not specified, the director shall determine the space requirements; a parking study may be required.

(A) *Residential Uses*

<i>Use</i>	<i>Parking Space requirements</i>
Single-family, and two-family	2 spaces for each dwelling unit
Multifamily	1.0 spaces for each efficiency unit, 1.5 spaces 1 bedroom and 2 bedroom unit, and 2 spaces for each 3 bedroom unit or larger except Eastern Shores which shall have 2 spaces per efficiency or 1 bedroom unit and 3 spaces per 2 bedroom unit or larger
Mobile home	1 space per unit

(B) *Commercial and Industrial Uses*

<i>Use</i>	<i>Parking Space Requirement</i>
Automobile service	2 spaces per bay
Barber and beauty shops	1 space for each 150 sq. ft. gfa

Banks	4.5 spaces for each 1,000 sq. ft. gfa, plus sufficient area for 5 stacking spaces for each drive-thru window. Drive-thru lanes shall be designed so as to be totally separated from required off-street parking spaces and driveways
Bowling alleys	4 spaces for each alley, plus such additional spaces as may be required for permitted uses such as restaurants and lounges
Car washes; Automated facilities	4 spaces, plus sufficient area for 8 stacking spaces
Self-service facilities	2 spaces, plus sufficient area for 4 stacking spaces for each bay
Funeral homes	6.5 spaces for each 1,000 sq. ft. gfa
Hotels, motels and other tourist accommodations	1.25 spaces for each rental sleeping unit, with meeting rooms; .75 spaces per sleeping room without
Industrial and manufacturing uses	1.5 spaces for each 1,000 sq. ft. gfa
Lodges, fraternal organizations and union halls	10 spaces for each 1,000 sq. ft. gfa
Offices, general	3 spaces for each 1,000 sq. ft. gfa
Offices, medical	4.5 spaces for each 1,000 sq. ft. gfa
Repair service establishments, shoes, watches, appliances and other similar uses	1 space for each 300 sq. ft. gfa
Restaurants (high quality), lounges, night clubs and discotheques	20 spaces for each 1,000 sq. ft. gfa
Restaurants (family)	15 spaces for each 1,000 sq. ft. gfa
Restaurant (fast food)	20 spaces for each 1,000 sq. ft. gfa, plus sufficient area for 8 stacking spaces for each drive-thru window. Drive-thru lanes shall be designed so as to

be totally separated from required off-street parking spaces and driveways. Outdoor seating areas shall be included in gross floor area computations.

Retail and personal service store (stand alone)

5 spaces for each 1,000 sq. ft. gfa

Service stations

3 spaces, plus 3 spaces for every service bay.

Shopping centers:

Less than 400,000 sq. ft.

4.0 spaces per 1,000 sq. ft.

400,000 - 600,000 sq. ft.

4.5 spaces per 1,000 sq. ft.

Over 600,000 sq. ft.

5.0 spaces per 1,000 sq. ft.

Theaters (motion picture)

1 space for each 4 seats or other accommodation provided

Vehicle sales and service operations

1.5 spaces for every 1,000 sq. ft. of enclosed floor area for sales or rental display, plus 2 spaces for each service bay, plus 15 percent of any open lot area for sales or rental display

Warehouse and wholesale

1 space for every 1,000 sq. ft. gfa

(C) *Community Facilities*

Use

Parking Space Requirements

Auditoriums, sports arenas, and gymnasiums

1 space for each 3 seats or other accommodations provided

Churches, synagogues and other houses of worship

1 space for each 4 seats in the principal assembly area

Day care centers and nurseries

2 spaces per 1,000 sq. ft. gfa, plus sufficient stacking spaces for pickup and drop-off

Government offices and facilities

4 spaces for every 1,000 sq. ft. gfa, plus 1 space for every 4 seats in any public assembly area

Hospitals

2 spaces per bed

Marinas	1 space for every boat slip or berth, plus such additional spaces as may be required for permitted uses such as retail stores and restaurants.
Museums, art galleries and libraries	2.5 spaces for every 1,000 sq. ft. gfa
Community care facilities	1 space for each 3 beds
Swimming pools (nonresidential)	1 space for each 50 sq. ft. of pool (water) area surface, plus such additional spaces as may be required for permitted uses such as restaurants.
Schools, elementary and secondary	1 space per 4 students
Schools, technical and vocational	1 space per student
Tennis, handball and racquetball facilities (indoor and outdoor)	4 spaces for every court, plus such additional spaces as may be required for permitted uses such as retail stores and restaurants
Universities and colleges	0.6 spaces per student

(D) *Supplemental Requirements*

- (1) Off-street parking requirements for those uses not enumerated but which are closely related and similar to uses listed above shall be determined by the director in accordance with the requirements for the listed similar use.
- (2) In stadiums, sports arenas, churches and other places of public assembly in which occupants utilize benches, pews or other similar seating arrangements, each eighteen (18) lineal inches of such seating facilities shall be counted as one (1) seat for the purpose of computing off-street parking requirements.

City of Opa-Locka Zoning Ordinance

Article 8 OFF-STREET PARKING AND LOADING REGULATIONS

Section 8.1 OFF-STREET PARKING REGULATIONS

A. Scope

All uses permitted or allowed to include those allowed as special exceptions pursuant to this Code shall be subject to the following minimum requirements and regulations.

C. Locations of On-Site Parking Spaces

Parking spaces shall be located so that no spaces are a greater distance than one hundred fifty (150) feet from the building or use to which they are assigned; provided this requirement shall not apply to parking spaces for auditoriums, stadiums, assembly halls, gymnasiums, and other similar places of assembly, industrial, wholesaling and manufacturing establishments; hospitals; and large scale retail, and wholesaling and manufacturing establishments...

H. Off-Street Parking Spaces

These regulations shall apply to all zoning districts.

1. For the purpose of this Section, the term "off-street parking space" shall consist of a minimum area for the parking of any automobile...Following are the minimum "off-street parking" requirements for the uses indicated....

- a. Residential Uses:** As to one, two, three and four unit residential structures on a single lot, for each dwelling unit or any building hereafter erected for dwelling purposes there shall be provided on the same lot therewith, or on a lot contiguous thereto, not less than 1-1/2 off-street parking spaces per unit. Any structure or development with five (5) or more units shall provide parking spaces according to the following schedule:

Two bedroom - at least 1.5 parking spaces for each dwelling unit with two bedrooms or less;

Three bedrooms or more - at least two (2) parking spaces for each unit.

Parking for units built for the elderly, financed under Federal Housing Administration, shall have at least .8 parking space per unit. Single family units shall have at least one parking space per unit.

b. Hotels, motels & lodging or boarding houses:

For facilities with more than one hundred (100) rooms, there shall be provided a minimum of one (1) parking space for each guest for the first forty (40) rooms, plus one additional space for each two (2) additional rooms, plus one (1) additional space for each four hundred (400) gross square feet of meeting rooms. For facilities less than one hundred (100) rooms, one (1) parking space per three (3) rooms, plus one (1) parking space per four hundred (400) square feet of meeting rooms shall be required.

c. Hospitals, sanitariums & welfare institution: One parking space for each two hundred (200) square feet of sleeping room area for patients contained in a building on premises served, together with one parking space for each physician staff member, and one parking space for every two (2) employees.

d. Places of assembly: Places of assembly, including theaters, clubs, churches, schools, auditoriums, mortuaries and other similar places, there shall be at least one off-street parking space for each six (6) seats in auditorium or one space for every ten (10) square feet of auditorium area without fixed seats.

e. Restaurants: Restaurants, including night clubs, diners, lunch counters, drive-ins and all other similar dining establishments shall have at least one off-street parking space for every one hundred fifty (150) square feet of floor area.

f. Commercial: A minimum of six (6) spaces or one space for each five hundred (500) square feet of floor area.

g. Office buildings: Office buildings and professional buildings. There shall be at least one off-street parking space for each four hundred (400) square feet of floor area.

h. Medical and dental clinics: For medical and dental clinics, there shall be at least one (1) parking space for each two hundred fifty (250) square feet of gross floor area.

i. Wholesale/warehousing establishments: For wholesale/warehousing establishments, there shall be at least one (1) parking space per one thousand (1,000) gross feet of building, up to ten thousand (10,000) square feet. Thereafter, one (1) space for each two thousand (2,000) gross square feet of building area shall be provided. These establishments shall have one

principal office on the premises.

j. Industrial facilities:

- (1) Where the building is designed for, and to be used by, a single occupant, one (1) parking space shall be provided for each one thousand (1,000) square feet of gross floor area in the building up to ten thousand (10,000) square feet, and then one (1) space for each two thousand (2,000) square feet of gross floor area thereafter.
- (2) Where the building is designed so that it can be used by multiple occupants, one (1) parking space shall be provided for each one thousand (1,000) square feet of gross floor area in the building. A minimum of two (2) parking spaces shall be provided for each bay in the building. In determining the number of bays, the Planning Director shall take into account the possibility of partitioning the building into multiple units, the number and location of bathrooms, the number and location of overhead or other door openings, the layout of electrical circuits and air conditioning units, etc. In determining the number of spaces to be provided, the formula requiring the greatest number of parking spaces shall be adhered to.
- (3) Where open lot or walled-in uses only are involved, such as salvage yards, batching plants, precast or prestressed concrete products, or the like, two (2) parking spaces for each five thousand (5,000) square feet of lot area shall be provided, or one (1) space for each two (2) employees shall be provided, whichever requires the greater number of parking spaces. Such parking spaces shall be located no farther than one thousand five hundred (1,500) feet from the industrial use in question. Such noncontiguous property to be used for parking must be located in BU-3 or an industrial district.
- (5) If retail sales are conducted or offices provided in connection with such industrial use, additional off-street parking will be provided as applies to the commercial uses or offices. The portion of the structure allocated for retail sales or offices shall be used as a basis for determining the additional off-street parking to be provided.

- k. For uses not indicated, parking shall be as required by the closest similar use above as interpreted by the Planning Director.
- l. Wrecking/junk yards shall have one (1) space for each four hundred (400) square feet of building, or one (1) parking space for each ten thousand (10,000) square feet of land area.

2. Location of off-street parking spaces: Except as otherwise prescribed for dwelling units, off-street parking spaces required by this Section shall be located on or adjacent to the lot on which the main building or use is located; parking spaces may be located on another site provided such site is not more than one thousand (1,000) feet from the building or use and a legal document satisfactory to the City is accepted establishing the required parking.
3. Standards for parking lots in general: The regulations governing parking lots shall be as follows:
 - f. All ninety degree parking...shall be at least ten feet by twenty feet (10' x 20')...
4. Thirty percent (30%) of all required parking may be for compact cars if clearly marked "for compact car only", and approved as to location by the building official. A minimum of eleven (11) parking spaces are needed before this allowance may be granted. Ninety degree parking for compact cars shall be at least eight (8) feet by seventeen (17) feet; otherwise the above sizes shall be met.

The City of South Miami is currently reviewing its off-street parking requirements, and some changes are being considered. The date of first consideration of these changes before the City Council is 13 September; the second reading is currently scheduled for 4 October.

City of South Miami Building Code

SECTION 20-4.4 OFF-STREET PARKING REQUIREMENTS

(A) Applicability

All structures and uses which are erected, established or enlarged within the City shall provide adequate off-street parking spaces and control mechanisms for on-site vehicular and pedestrian traffic in order to insure [sic] the safety and convenience of the public pursuant to the requirements of this section.

(B) Space Requirements

The minimum number of off-street parking spaces required for each permitted or special use shall be as set forth below and referenced in Section 20-3.3D [not provided]. Where fractional spaces result, the number of spaces required shall be the next highest whole number.

- (1) Two (2) spaces per dwelling unit.
- (2) Two (2) spaces per dwelling unit, provided that at least one (1) space per unit shall be enclosed.
- (3) One and one-half (1.5) spaces per efficiency or studio unit and two (2) spaces per unit with one or more bedrooms, plus an additional visitor space for every ten (10) units.
- (4) One (1) space per guest room, plus two (2) spaces for the reception office.
- (5) One and three-quarters (1.75) spaces per bed.
- (6) One (1) space per three (3) seating spaces in the main assembly room.
- (7) One (1) space per one hundred (100) square feet of gross floor area.
- (8) One (1) space per one hundred fifty (150) square feet of gross floor area.
- (9) One (1) space per two hundred (200) square feet of gross floor area.
- (10) One (1) space per two hundred fifty (250) square feet of gross floor area.
- (11) One (1) space per three hundred (300) square feet of gross floor area.
- (12) One (1) space per four hundred (400) square feet of gross floor area.
- (13) One (1) space per five hundred (500) square feet of gross floor area.

- (14) One (1) space per one thousand (1000) square feet of gross floor area.
- (15) One (1) space per four (4) seats or seating places.
- (16) Five (5) spaces per alley or five hundred (500) square feet of rink area.

(C) Dimensional Design Standards

- (1) Standard non-handicapped parking spaces.

All required off-street parking spaces shall be a minimum of nine (9) feet in width by eighteen (18) feet in depth...

(D) Required Handicapped Spaces

(E) Required Parking Improvements

(F) Location and Ownership of Spaces

- (1) All off-street parking spaces shall be located on the same lot with the structure or use served, except as may be permitted below.

(2) Spaces Located Off-Site

- (a) Where there is an increase in the number of spaces provided collectively or used jointly by two (2) or more uses or establishments, required off-street parking spaces may be located and maintained up to three hundred (300) feet from an institutional use served and up to five hundred (500) feet from another nonresidential use served.
- (b) Off-site parking spaces are not permitted in RS, RT, RM, and RO districts.

(G) Joint Use Spaces

- (1) With four (4) affirmative votes of the City Commission, up to fifty (50) percent of the required parking spaces for a theater, auditorium or nightclub, and up to one hundred (100) percent of the required spaces for a church, synagogue or other house of worship may be provided and used jointly with office, retail, repair and service establishments not normally open or operating during the same hours as the sharing uses. Such joint use

spaces shall be permitted only where the parking and both proposed uses are under common ownership or where there are one (1) or more leases in effect and a notice is recorded, all in accordance with the requirements of subsection 20-4.4 G.2.c [sic] above for off-site parking.

- (2) In the Specialty Retail "SR" district, residential uses may share spaces with nonresidential uses within the same structure.

(H) MetroRail Usage Considerations

When all or a portion of a proposed structure or use is to be located within five hundred (500) feet of the South Miami MetroRail Station, as measured from the property line to property line, four (4) affirmative votes of the City Commission may reduce the number of required off-street parking spaces for such use by up to fifty (50) percent, depending upon the nature and type of land use and its potential user relationship to rapid transit facilities.

(I) Parking Fees Prohibited Generally; Exceptions

- (1) No parking fees, charges or other remuneration shall be charged for the use of any or all off-street parking spaces as may be required by this Code, except as provided in subparagraph (3) below.
- (2) Nothing herein shall be construed to affect any parking fees, charges or other remuneration for publicly-owned parking spaces or for off-street parking spaces not required by this Code.
- (3) In SR, H, and MO zoning districts, the City Commission may waive the prohibition contained in subparagraph (1) above under such terms and conditions as it may establish, following public hearing, when it determines that the following criteria are met:
 - (a) The sole purpose of the parking fee, charge or other remuneration is for the use of excess and/or unused off-street leased spaces to serve the lessee's off-street parking needs for property within the City of South Miami which is undergoing construction or reconstruction.
 - (b) The time period for such waiver shall not exceed one year unless the City Commission shall grant a further waiver under the provisions of this paragraph for good cause shown.
 - (c) The waiver shall not result in a violation of the off-street parking requirements established by Article IV of the Land Development Code.

- (d) For purposes of this subsection, the phrase "excess and/or unused off-street leased parking spaces" shall mean those off-site parking spaces which are either in excess of those parking required for the lessor or which are unused by the lessor, comparing lessor's occupancy to lessor's total leasable space.

The Town of Surfside Code of Ordinances

Chapter 18 -- Zoning

ARTICLE II. DEFINITIONS AND RULES OF CONSTRUCTION

Sec. 18-3. Definitions.

For the purpose of this chapter, certain terms and words are hereby defined. For convenience, all defined words and terms are set out in different type.

- (31) *Floor area.* ...In particular, floor area includes:
- (a) Basement space used for retailing shall be included for the purposes of calculating requirements for accessory off-street parking spaces...

However, the floor area of a building shall not include:

- (a) Basement space when used for parking of vehicles
- (35) *Garage, parking.* A building or portion thereof designed or used for the temporary storage of motordriven vehicles.
- (36) *Garage, private.* An accessory building, not exceeding nine hundred (900) square feet in floor area, designed or used for the storage of not to [sic] more than four (4) automobiles.
- (57) *Parking lot.* An open, unoccupied area of land used or required for use, for parking automobiles exclusively and in which no gasoline, oil, services, washracks or accessories are sold or no other business conducted.
- (58) *Parking space, off-street.* A paved area not in the street or alley and having an area of not less than nine (9) by twenty (20) feet, exclusive of driveways, permanently reserved for the temporary storage of one vehicle and connected with a street or alley by a paved driveway which affords ingress and egress for an automobile without requiring another automobile to be moved.

ARTICLE IX. OFF-STREET PARKING REGULATIONS

Sec. 18-53 Off-street parking requirements.

- (A) Except as otherwise provided herein, when any building or structure is hereafter constructed or structurally altered so as to increase the number of dwelling units or hotel/motel rooms, to increase its total commercial floor area and/or when any

building or structure is hereafter converted to any of the uses listed in paragraph (B) below, off-street parking spaces shall be provided in accordance with the requirements of paragraph (B) below, or as required in subsequent sections of this article.

- (B) The number of off-street parking spaces which shall be required to serve each building and use shall be determined in accordance with the following table:
- (1) Single-family dwelling in the RS-1 district -- two (2) spaces.
 - (2) Single-family dwelling in all other districts -- one space.
 - (3) Two-family dwelling -- one space for each dwelling unit.
 - (4) Multiple-family dwelling -- one space for each dwelling unit.
 - (5) Hotel and motel -- one space for each rental room or suite.
 - (6) Church, synagogue or temple or place of assembly -- one space for every four (4) seats and one space for every six (6) feet of bench seating.
 - (7) Private clubs and lodges -- one space per two hundred fifty (250) square feet of gross floor area.
 - (8) Auditorium or theatre -- one space for each four (4) seats.
 - (9) Grocery, fresh fruit, or meat market -- one space for each two hundred fifty (250) square feet of gross floor area.
 - (10) Retail store or personal service establishment -- one space for each three hundred (300) square feet of gross floor area.
 - (11) Office or office building -- one space per four hundred (400) square feet of gross floor area, however, medical and dental offices and clinics shall provide one space per three hundred (300) square feet of gross floor area.
 - (12) Restaurants or other establishments for the consumption of food and beverages on premises -- one space per four (4) seats.
 - (13) Place of assembly without fixed seats -- one space for each fifty (50) square feet of gross floor area available for seats.
 - (14) Banks and savings and loan associations -- one space per three hundred (300) square feet of gross floor area.

- (C) In the case of uses within the RM-1, B-1 and CO-1 districts on lots north of 93rd Street, provision of the required parking spaces listed in paragraph (B) above, may be met by either providing off-street parking spaces in accordance with section 18-53 herein or through the payment of an impact fee. Such impact fee shall be based on the prevailing cost of a parking decal for the annual use of a parking space within a parking facility owned by the Town of Surfside. The impact fee shall be determined by multiplying the total number of spaces required by three (3) times the prevailing cost of said parking decal. Payment shall be in the form of a cash payment each year, the first payment of which shall be due prior to the issuance of a building permit for constructing or otherwise establishing the use(s) for which the impact fee is assessed. The next payment shall be due one year after the issuance of a certificate of occupancy for said use and subsequent payments shall be due each year thereafter. Funds generated in this manner shall be deposited in a town account specifically established to provide parking and related improvements in and adjacent to the Town of Surfside's commercial districts.

Sec. 18-53. Interpretation of these requirements.

- (C) The parking space requirements for a use not specifically listed in this section shall be the same as for a listed use of similar characteristics of parking demand generation.
- (D) In the case of mixed uses, uses with different parking requirements occupying the same building or premises, the parking spaces required shall equal the sum of the requirements of the various uses computed separately.

Sec. 18-57. Design standards.

- (A) *Minimum area.* For the purposes of these regulations, except as provided below, off-street parking spaces shall not be less than nine (9) feet by twenty (20) feet... However, where compact car spaces are permitted they shall be a minimum of eight (8) feet by sixteen (16) feet...
- (H) Compact and handicapped spaces. Parking stall and aisle dimensions shall conform to the Zoning Code of Metropolitan Dade County entitled "Minimum Parking Stall Dimensions," except as may otherwise be provided in this Code. The percentage of compact spaces in any individual parking facility shall not exceed [certain percentages based on total number of spaces]... For purposes of this section, a compact car shall mean an automobile which has a width of no more than seventy-four (74) inches and a length of no more than one hundred ninety-two (192) inches.

City of Sweetwater

4.03.02 *Off-Street Parking Requirements*

A. **Required number of spaces:**

All developments within the city shall provide the minimum required number of off-street parking spaces shown in Table 4.2

Table 4.2

<u>USE</u>	<u>MINIMUM REQUIRED PARKING SPACES</u>
Single Family dwelling	2
Duplex dwelling	4
Multiple Family dwelling	
One (1) bdrm	1.5/D.U.
Two (2) bdrms or more	2.0/D.U.
plus visitor's parking	0.25/D.U.
Residential Mobile Home	2
Commercial/Office - general	1 /250 s.f.
Churches, Theaters, Auditoriums, and other places of public assembly	1 /3 occupants
Restaurants, cafeteria, lounge, bars	1 /3 seats
Restaurants, (drive-in/thru)	minimum 25 spaces
Schools (Vocational, Grade or Arts)	0.5/student + 1/employee

B. **Required minimum number of handicap parking spaces**

[same as ADA requirements]

4.03.04 *Design Standards for Vehicular Use Areas*

A. **Location:**

1. Except as provided herein, all required off-street spaces and the use they are intended to serve shall be located on the same lot.
2. The Zoning Director may approve off-site parking facilities as part of the parking required by this Code if:

- a. The location of the off-site spaces will adequately serve the use for which it is intended. The following factors shall be considered:
 - (1) Proximity of the off-site spaces to the use that they will serve.
 - (2) Ease of pedestrian access to the off-site parking spaces.
 - (3) Whether or not off-site parking spaces are compatible with the high turnover uses such as retail.
- b. The location of the off-site parking spaces will not create unreasonable,
 - (1) Hazards to pedestrians.
 - (2) Hazards to vehicular traffic
 - (3) Traffic congestion.
 - (4) Interference with access to other parking spaces in the vicinity.
 - (5) Detriment to any nearby use.
- c. The developer supplies a written agreement...assuring the continued availability of the off-site parking facilities for the use they are intended to serve.

B. Size

- 1. Space shall be a minimum of eight and one-half (8.5) by eighteen (18) feet...

The Village of Virginia Gardens Village Code
Section 6.6.2 Table of Off-Street Parking Requirements

Use	Parking Spaces Required Per Unit of Measurement
1. Single and two-family detached dwellings	Two (2) per dwelling unit.
2. Multi-family dwellings and townhouses	2.2 per dwelling unit plus one (1) per each five units or portion thereof.
3. Churches or other places of worship	One (1) per four permanent seats in the main auditorium or NFPA maximum use fire requirements.
4. Restricted Commercial	One and one-half (1.5) per 400 square feet of total floor area; provided, however, in no event, shall there be less than two (2) parking spaces for each use.
5. General Commercial	One (1) per 200 square feet of total ground floor area. One (1) per 1,000 square feet of total floor area of each upper story.
6. Hotels, motels, and motor inns	One and one-tenth (1.1) per 500 square feet of accessory commercial floor area except for a restaurant which shall be the same as 7.
7. Medical or dental offices, clinics, or legal offices	Seven (7) for each doctor or dentist or attorney or 100 square feet of floor space whichever is greater. One (1) per each four seats.
8. Restaurants, nightclubs, or other eating places	One (1) per three seats as established by the latest standards of the South Florida Building Code or one (1) per 200 square feet of floor area, whichever is greater.
9. Theaters, auditoriums, or other places of public assembly	One (1) per each four seats.
10. Warehouse or wholesale commercial uses	One (1) per 750 square feet; however, each separate business shall provide a minimum of three (3) spaces

City of West Miami Building Code

Section 5. OFF STREET PARKING, LOADING AND UNLOADING REQUIREMENTS

5.1 The off-street parking...requirements shall apply to all new buildings or structures, or to any existing buildings or structures that may be structurally altered or added to after the effective date of this Ordinance. ...Land use for off-street parking in conjunction with a business must be included in the title description of the property upon which the business is situated and shall not be disposed of separately from the business property.

5.2 The required off-street parking shall be determined in accordance with the following table:

<u>LAND USE</u>	<u>OFF STREET PARKING Minimum Number of Spaces</u>
SINGLE FAMILY RESIDENCE	One Space on premises
DUPLEX AND APARTMENT	One and one-half space on premises for each dwelling unit of 2 bedrooms or less and two spaces on premises for each dwelling unit of 3 bedrooms or more.
MOTELS AND HOTELS	One space on premises for each unit.
RETAIL BUSINESS, COMMERCIAL	One space for each 300 square feet or fraction thereof of gross floor area.
CHURCHES, THEATERS, AUDITORIUMS AND SIMILAR PLACES OF PUBLIC ASSEMBLY, RESTAURANTS AND PUBLIC DINING ROOMS	One space for each 4 seats or fraction of 4 seats.
OFFICE BUILDINGS, CLINICS, HOSPITALS, WELFARE INSTITUTIONS	6 spaces minimum plus one space for each 300 square feet or fraction thereof of gross floor area over 1800 square feet.

Where more than one of the uses specified above is operated upon a tract of land or within a building, sufficient parking spaces on premises as set forth herein shall be required for each such use.

5.2A Where a building contains two or more separate self-contained units or stores, each with separate and private entrances, the required off-street parking shall be three parking spaces for each separate unit or store or one parking space for each 200 square feet or fraction thereof of gross floor area whichever shall require the greater number of parking spaces.

Where two or more businesses under separate ownership are operated in a building under one roof or are not contained in separate self-contained units or stores with separate and private entrances, the required off-street parking shall be four parking spaces per each business unit or one parking space for each 200 square feet or fraction thereof of gross floor area occupied by each business, whichever shall require the greater number of parking spaces.

5.7 Any parking areas...within the zoned street right-of-way shall not be considered in computing the parking spaces...required under the terms of this ordinance.

Appendix C Ordinance Matrices

APPENDIX C

Ordinance Matrices

There are twenty-seven municipalities in metropolitan Dade County and, in addition to the County regulations, each has its own parking-related ordinances. Some jurisdictions codify only parking rules and violations; others include engineering and aesthetic ordinances. Through the use of zoning codes and ordinances, jurisdictions also address off-street parking supply provisions for certain land uses, and technical details supplementing such provision requirements. With twenty-eight governmental jurisdictions in metropolitan Dade County, each using variations in land-use definitions resulting in myriad categories, and each adopting different independent variables, a comparison of municipal off-street parking regulations, could have become quite complicated. To further complicate matters, some cities (e.g: Miami and Miami Beach) break up those jurisdictions into specific overlay districts; while the City of Miami adds special requirements within transportation demand management (TDM) programs.

For this study a simplified matrix construction was chosen. The *PARKING POLICY COMPARISON MATRIX* was developed to show the similarities and differences in parking policies across jurisdictions. The remaining four land-use matrices were developed using artificial categories within land-use sectors. The four sectors are: residential, commercial, industrial, and public. These land-use sector categories are representative as opposed to specific. That is, the land-use sectors and the artificial categories do not necessarily match with any published categorizations of land-use types, and no such specificity is implied.

For the purposes of this study, the details of parking provision requirement quantity variations is less important than pointing out that there are inconsistencies and policy differences. These inconsistencies and differences are to be expected in a fragmented jurisdiction such as Dade County.

The *POLICY COMPARISON MATRIX* covers general parking policy factors:

1. **STALL SIZE** - Physical parking space size. There are some differences across jurisdictions (range: 8.5ft x 18ft to 10ft x 25ft), and it may be better to leave these physical differences as they are for now. Nevertheless, the various municipalities may wish to add language to their ordinances that offers some size flexibility in the future. The "one-size-fits-all" parking stall dimensions of 8.5ft x 18ft suggested by Smith and Hekimian, (1985) or the ITE's "Guidelines" (ITE Committee 5D-8, 1990) of 8.5ft x 15ft may be used as starting points for discussion. Some jurisdictions (NOT SPEC'D) do not specify stall dimensions.
2. **COMPACT, TOO?** - Does the ordinance include the use of compact car stall sizes for certain percentages of parking supply provided?
3. **MIXED USE ADDITIVE?** - Does the ordinance address mixed-use parking supply? NO MENTION simply means the subject is not addressed at all in the jurisdiction's ordinance. YES means that mixed use site parking provision must be additive. That is, the parking provision requirements for multiple uses must be a cumulative figure derived by adding together each use's discreet parking requirements to reach the total required at the site. NO means that wording in the ordinance allows some alternative method in determining total parking provision requirements for mixed-use sites. This is a definite area for progress, as alternatives in provision requirements for mixed-use sites can be a win-win situation for both municipalities and developers.
4. **FLEXIBLE PROVISIONS?** - Are there some sections of the ordinance that allow for flexibility in determination of quantities required for land uses or for relief in supply mandates? NO MENTION means that the ordinance makes no comment whatsoever. A NO indicates that there is no allowance for flexibility, but YES indicates that there is some section of the ordinance that allows for discretion by planning agencies or relief from mandates. Again, this is an area where a countywide policy of flexibility may be cooperatively produced by simply adding wording to the municipal ordinances that allows for situational determination of parking supply quantities based on land-use, local conditions, transit location, etc.

5. **CATEGORIES USED** - How many separate categorizations of land-use types were used in the ordinance that determined the quantity required for each use? The range (0 - 83) was extraordinary. This complication was not helped by the categorizational vocabulary and additional breakdowns that involved zoning districts, specific locations, and lot size. This is an area ripe for streamlining.

The *PARKING POLICY COMPARISON MATRIX* shows some of the impacts of jurisdictional fragmentation in parking policies across a large metropolitan area; however, it also can be used as a starting point for a program to bring municipal and county policies into harmony. Deeper insight into the differences (and similarities) between jurisdictions may be available by comparing the abstracted Dade County (*Appendix B-2*) and municipal (*Appendix B-3*) ordinances.

METROPOLITAN DADE COUNTY PARKING POLICY COMPARISON MATRIX

CITY	STALL SIZE	COMPACT, TOO?	MIXED USES ADDITIVE?	FLEXIBLE PROVISIONS?	CATEGORIES USED
BAL HARBOUR	9 or 10 x 19	NO	YES	NO	7
BAY HARBOR ISLANDS	9 x 20	NO	NO MENTION	NO	7
BISCAYNE PARK	8.5 x 18	NO	NO MENTION	YES	5
CORAL GABLES	8.5 x 18	NO	YES	NO	33
EL PORTAL	160 sq.ft.min.	NO	NO	YES	11
FLORIDA CITY	USE DADE CODE				
GOLDEN BEACH	NOT SPEC'D	NOT SPEC'D	NO MENTION	NO MENTION	1
HIALEAH	9 x 19	7.5 x 16	NO MENTION	NO	10
HIALEAH GARDENS	NOT SPEC'D	NOT SPEC'D	YES	NO	14
HOMESTEAD	10 x 20	NO	YES	NO	18
INDIAN CREEK VILLAGE	NOT SPEC'D	NOT SPEC'D	NO MENTION	NO MENTION	0
ISLANDIA	NO CODE				0
KEY BISCAYNE	USE DADE CODE				
MEDLEY	USE DADE CODE				
MIAMI	NOT SPEC'D	NOT SPEC'D	NO	YES	7
MIAMI BEACH	8.5 x 18	NO	NO	YES	59
MIAMI SHORES	10 x 25 max	NO	NO MENTION	NO MENTION	5
MIAMI SPRINGS	9 x 19	NO	YES	YES	11
NORTH BAY VILLAGE	10 x 20	8 x 16	NO	YES	23
NORTH MIAMI	9 x 18	NO	YES	YES	83
NORTH MIAMI BEACH	9 x 18	NO	NO	YES	40
OPA-LOCKA	10 x 20	8 x 17	YES	YES	15
SOUTH MIAMI	9 x 18	NO	NO	YES	16
SURFSIDE	9 x 20	8 x 16	YES	YES	14
SWEETWATER	8.5 x 18	NO	NO MENTION	NO MENTION	10
VIRGINIA GARDENS	NOT SPEC'D	NOT SPEC'D	NO MENTION	NO MENTION	10
WEST MIAMI	10 x 20	NO	YES	NO MENTION	6
DADE COUNTY	8.5 x 18	NO	YES	YES	43

The *RESIDENTIAL FACILITIES MATRIX* covers a broad set of "residential" land-uses, including retirement homes, hotels, and motels. In general, there is not a great variance across jurisdictions. This is to be expected, after all, residential use (where vehicles spend roughly half of their service life parked) has a linear parking generation factor. That is, people park their cars where they live. Economic factors such as personal income have an effect on quantities of vehicles owned; zoning ordinances do not.

The simplified categories used in this matrix include the generalizations:

- A. One Family Detached - private homes of one or more bedrooms.
- B. Two Family Detached - duplexes.
- C. Multi-Family - condominiums.
- D. Apartment - apartment complexes of one or more stories.
- E. Retirement - retirement, managed care, or nursing homes.
- F. Hotel - traditional hotels of one or more stories.
- G. Motel - motor hotels, motor inns, and lodges.

No category was included for mobile home parks, recreational vehicle parks, migrant worker housing, or transient quarters. As with all of the ordinance comparison matrices, there could have been a large number of clarification notes and footnotes added to the matrix format. However, for simplicity, the basic supply quantity mandated for a general use within (or close to) the use category used for the matrix construction was inserted in the data field.

METROPOLITAN DADE COUNTY PARKING ORDINANCE COMPARISON MATRIX – RESIDENTIAL FACILITIES

CITY	1 FAMILY DET	2 FAMILY DET	MULTI-FAMILY	APARTMENT	RETIREMENT	HOTEL	MOTEL
BAL HARBOUR	2/UNIT		1.5/UNIT			1/UNIT	
BAY HARBOR ISLANDS	2/UNIT	2/UNIT	2/UNIT	2/UNIT		1/UNIT	
BISCAYNE PARK	2/UNIT	2/UNIT					
CORAL GABLES	1/UNIT	1.5-2/UNIT	2/UNIT	2/UNIT	1/3 RESIDENTS	1/ROOM	1/ROOM
EL PORTAL	2/UNIT	2/UNIT	2/UNIT	2/UNIT	1/5 BEDS		
FLORIDA CITY	USE DADE CODE						
GOLDEN BEACH	AS REQUIRED						
HIALEAH	2/UNIT	2/UNIT		2/UNIT	1/4 BEDS	1.125/UNIT	1.125/UNIT
HIALEAH GARDENS	2/UNIT	2/UNIT	2/UNIT			1.1/UNIT	1.1/UNIT
HOMESTEAD	1-2/UNIT					1/UNIT	1/ROOM
INDIAN CREEK VILLAGE	AS REQUIRED						
ISLANDIA	NO CODE						
KEY BISCAYNE	USE DADE CODE						
MEDLEY	USE DADE CODE						
MIAMI	2/UNIT max					2/3 UNITS max	
MIAMI BEACH	2/UNIT			1.5/UNIT	1/2 BEDS	1/UNIT	1/UNIT
MIAMI SHORES	1/UNIT		2/UNIT	2/UNIT			
MIAMI SPRINGS	2/UNIT	2/UNIT	2.25/UNIT			1/UNIT	1/UNIT
NORTH BAY VILLAGE	2/UNIT		2/UNIT		0.75/UNIT	1/UNIT	1/UNIT
NORTH MIAMI	2/UNIT	5 SPACES	2.5/UNIT		1/4 RESIDENTS	1/UNIT	1/UNIT
NORTH MIAMI BEACH	2/UNIT	2/UNIT	1-3/UNIT		1/3 BEDS	1.25/UNIT	0.75/UNIT
OPA-LOCKA	1.5/UNIT	1.5/UNIT			0.8/UNIT	VARIES	VARIES
SOUTH MIAMI							
SURFSIDE	1-2/UNIT	1/UNIT	1/UNIT			1/ROOM	1/ROOM
SWEETWATER	2	4	1.75-2.25/unit				
VIRGINIA GARDENS	2/UNIT	2/UNIT	2.2/UNIT	2.2/UNIT		1.1/UNIT	1.1/UNIT
WEST MIAMI	1/UNIT	1.5/UNIT		1.5/UNIT		1/UNIT	1/UNIT
DADE COUNTY	2/UNIT	2/UNIT	2-2.25/UNIT	1.5-2/UNIT	1/2 BEDS	1/ROOM	1/ROOM

The *COMMERCIAL FACILITIES MATRIX* covers a broad set of "commercial" land-uses, including retail, offices, churches, and restaurants. Variations in ordinance-required parking quantities in this set stem from two factors:

1. The use of catch-all quantity requirements. These are easy ways of avoiding issues of flexibility because they tend to be based on "rules of thumb" that, because they have been legitimized through inclusion in ordinances (convention), they are taken as reality by all of the actors concerned. As Shoup and Pickrell (1978) pointed out, this implies that planners know "how much parking is enough", even though this cannot be true.
2. The use of multiple variables (*i.e.*: SEATS vs sq.ft.) in determining provision requirements.

The simplified categories used in this matrix include the generalizations:

- A. Office - includes offices of various types including financial, research and development facilities, boiler room activities, medical clinics, and a host of other uses.
- B. Retail - includes retail shops, stores, malls, etc.
- C. Auto Repair - service stations, body and paint shops, and specialty shops.
- D. Church - self-explanatory.
- E. Theater - single and multi-screen cinemas, stages, and music halls.
- F. Restaurant - sit down and drive-in.

The "commercial" sector is the one area most in need of a countywide policy as it is the area where development issues are most affected by the myths of parking lore. Consistent definitions of land-use categories, the implementation of single variables for quantity determination within categories, and the use of a countywide vocabulary would help to simplify the parking supply provision requirement process.

This area represents much of what is considered to be private sector development categories, and this area also shows the most diversion in municipal supply mandates. For example, Biscayne Park requires churches to provide one parking space for every three seats (1/3 SEATS), while nearby Opa-Locka mandates only one space be provided for every six seats (1/6 SEATS), requiring twice as much parking supply for Biscayne Park churches as compared to Opa-Locka's. On the other hand, in comparing municipal church parking requirements with Dade County's, can X number of seats be made to equate with Y square feet? This question may seem simplistic, but resolving the differences in variables could be a starting point towards cross-jurisdictional parking policy consistency.

A more detailed comparison using this matrix may have been possible through the use of extensive footnotes, however simplicity and ease of understanding of the policy-oriented aspects of commercial parking provision zoning ordinances was preferred for this study. Some individual comparisons are provided in *Part III* of this study: *Regulations Discussion, Municipal Ordinances*.

METROPOLITAN DADE COUNTY PARKING ORDINANCE COMPARISON MATRIX – COMMERCIAL FACILITIES

CITY	OFFICE	RETAIL	AUTO REPAIR	CHURCH	THEATER	RESTAURANT
BAL HARBOUR	4/1000 sq.ft.			EXEMPT		
BAY HARBOR ISLANDS	1/300 sq.ft.	1/300 sq.ft.				2/5 SEATS
BISCAYNE PARK				1/3 SEATS		
CORAL GABLES	1/300 sq.ft.	VARIES	1/500 sq.ft.	1/5 SEATS	1/4 SEATS	1.5/100 sq.ft.
EL PORTAL	1/300 sq.ft.	1/200 sq.ft.		1/3 SEATS	1/3 SEATS	1/150 sq.ft.
FLORIDA CITY	USE DADE CODE					
GOLDEN BEACH	NOT APPLIC					
HIALEAH	1/200 sq.ft.	1/200 sq.ft.		1/40 sq.ft.		
HIALEAH GARDENS	7/100 sq.ft.	1.5/400 sq.ft.		1/4 SEATS	1/4 SEATS	1/3 SEATS
HOMESTEAD	1/400 sq.ft.	1/300 sq.ft.		1/4 SEATS	1/4 SEATS	1/4 SEATS
INDIAN CREEK VILLAGE	NOT APPLIC					
ISLANDIA	NO CODE					
KEY BISCAYNE	USE DADE CODE					
MEDLEY	USE DADE CODE					
MIAMI	1/800 sq.ft.	1/800 sq.ft.	1/1000 sq.ft.		1/4 SEATS	1/100 sq.ft.
MIAMI BEACH	1/400 sq.ft.	1/300 sq.ft.	1/400 sq.ft.	1/6 SEATS	1/4 SEATS	1/4 SEATS
MIAMI SHORES				1/4 SEATS		
MIAMI SPRINGS	1/300 sq.ft.	1/300 sq.ft.		1/100 sq.ft.		1/100 sq.ft.
NORTH BAY VILLAGE	1/300 sq.ft.	1/200 sq.ft.	3 + 3/BAY	1/4 SEATS	1/3 SEATS	1/75 sq.ft.
NORTH MIAMI	1/300 sq.ft.	1/300 sq.ft.	1/500 sq.ft.	1/4 SEATS	1/4 SEATS	1/4 SEATS
NORTH MIAMI BEACH	3/1000 sq.ft.	5/1000 sq.ft.	2/BAY	1/4 SEATS	1/4 SEATS	15/1000 sq.ft.
OPA-LOCKA	1/400 sq.ft.	6/500 sq.ft.		1/6 SEATS	1/6 SEATS	1/150 sq.ft.
SOUTH MIAMI						
SURFSIDE	1/400 sq.ft.	1/300 sq.ft.		1/4 SEATS	1/4 SEATS	1/4 SEATS
SWEETWATER	1/250 sq.ft.			1/3 occupants	1/3 occupants	1/3 SEATS
VIRGINIA GARDENS	1/200 sq.ft.	1/200 sq.ft.		1/4 SEATS	1/4 SEATS	1/3 SEATS
WEST MIAMI	6 SPACES min	1/300 sq.ft.		1/4 SEATS	1/4 SEATS	1/4 SEATS
DADE COUNTY	1/300 sq.ft.	1/250 sq.ft.	3/2500 sq.ft.	1/50 sq.ft.	1/50 sq.ft.	1/50 sq.ft.

The *INDUSTRIAL FACILITIES MATRIX* covers a broad set of "industrial" land-uses, including some relatively specific to Dade County. Not all jurisdictions had need to address industrial uses due to their exclusively residential or mixed residential/commercial makeup. The variations within categories are relatively limited and seem to stem from differences in categorical emphasis. Industrial development is relatively controlled within the county and many of the small municipalities have no need to address ordinances to this development sector.

The simplified categories used in this matrix include the generalizations:

- A. Industrial - materials processing, factories, and assembly plants
- B. Wholesale - discount centers, farmers markets, and similar uses.
- C. Warehouse - distribution centers, bonded agents, and moving and storage.
- D. Open Lot - junk, scrap, and wrecking yards; and concrete plants.
- E. Marinas - dry or wet slip, sail or power; may include sales facilities.

Many of the municipalities in the county have no need to address these land-use parking requirements and these are indicated by NOT APPLIC or not applicable to this jurisdiction.

METROPOLITAN DADE COUNTY PARKING ORDINANCE COMPARISON MATRIX – INDUSTRIAL FACILITIES

CITY	INDUSTRIAL	WHOLESALE	WAREHOUSE	OPEN LOT	MARINA
BAL HARBOUR	NOT APPLIC				
BAY HARBOR ISLANDS	NOT APPLIC				
BISCAYNE PARK	NOT APPLIC				
CORAL GABLES	1/300 sq.ft. OFFICE + 1/1000 sq.ft.				
EL PORTAL	NOT APPLIC				
FLORIDA CITY	USE DADE CODE				
GOLDEN BEACH	NOT APPLIC				
HIALEAH	1/1000 sq.ft.				
HIALEAH GARDENS		1/750 sq.ft.	1/750 sq.ft.		
HOMESTEAD	1/1000 sq.ft.				
INDIAN CREEK VILLAGE	NOT APPLIC				
ISLANDIA	NO CODE				
KEY BISCAYNE	USE DADE CODE				
MEDLEY	USE DADE CODE				
MIAMI					
MIAMI BEACH	1/1000 sq.ft.	1/1000 sq.ft.	1/1000 sq.ft.		1/2 SLIPS
MIAMI SHORES	NOT APPLIC				
MIAMI SPRINGS	NOT APPLIC				
NORTH BAY VILLAGE		1/300 sq.ft.			1/SLIP
NORTH MIAMI	1/300 sq.ft.	1/300 sq.ft.	1/1000 sq.ft.		
NORTH MIAMI BEACH	1.5/1000 sq.ft.	1/1000 sq.ft.	1/1000 sq.ft.		1/SLIP
OPA-LOCKA	1/1000 sq.ft.	1/1000 sq.ft.	1/1000 sq.ft.	2/5000 sq.ft.	
SOUTH MIAMI					
SURFSIDE	NOT APPLIC				
SWEETWATER	NOT APPLIC				
VIRGINIA GARDENS		1/750 sq.ft.	1/750 sq.ft.		
WEST MIAMI	NOT APPLIC				
DADE COUNTY	1/1000 sq.ft.	1/600 sq.ft.		2/5000 sq.ft.	0.5 – 1/SLIP

The *PUBLIC FACILITIES MATRIX* covers a broad set of "public" land-uses, including schools and hospitals. There were interesting cross-jurisdictional variations in the quantities of parking required for these uses. Some were due to differences in determination variables, others by the use of catch-all wording in specific ordinances. Public uses (in the case of the simplistic categories used for this study) tend to be high parking requirement generators, however, there would also seem to be a case to be made for site-specific determination of parking supply requirements for these uses. Countywide parking policy reform may begin by reforming public sector land-use parking policies.

The simplified categories used in this matrix include the generalizations:

- A. Public - auditoriums, event centers, arenas, and sports venues.
- B. Government - federal, state, or local agency facilities.
- C. School - pre-schools, elementary, and junior high schools; public and private.
- D. High school - public and private.
- E. Hospital - public and private.
- F. Cultural - art and science museums, galleries, and exhibition halls.

Many of the general categorizations used for these matrices do not directly correspond with specific categories in all jurisdictions. Additionally, many of the municipal ordinances are much more complicated in wording and quantity determination formulas. Some typical wording is included in *Part III* of this study: *Regulations Discussion, Municipal Ordinances*.

METROPOLITAN DADE COUNTY PARKING ORDINANCE COMPARISON MATRIX – PUBLIC FACILITIES

CITY	PUBLIC	GOVERNMENT	SCHOOL	HIGH SCHOOL	HOSPITAL	CULTURAL
BAL HARBOUR		EXEMPT				
BAY HARBOR ISLANDS	NOT APPLIC					
BISCAYNE PARK	NOT APPLIC					
CORAL GABLES	1/4 SEATS		1/ROOM	1/10 SEATS	2/BED	1/250 sq.ft.
EL PORTAL	1/3 SEATS	1/125 sq.ft.	1/3 STAFF			
FLORIDA CITY	USE DADE CODE					
GOLDEN BEACH	NOT APPLIC					
HIALEAH			1.5/CLASSROOM		1/2 BEDS	
HIALEAH GARDENS	1/4 SEATS					1/700 sq.ft.
HOMESTEAD	1/4 SEATS		1/4 SEATS	1/4 SEATS		
INDIAN CREEK VILLAGE	NOT APPLIC					
ISLANDIA	NO CODE					
KEY BISCAYNE	USE DADE CODE					
MEDLEY	USE DADE CODE					
MIAMI						
MIAMI BEACH	1/4 SEATS		1/CLASSROOM	1/6 SEATS	1.5/BED	
MIAMI SHORES			1/ROOM	1/ROOM		
MIAMI SPRINGS	1/100 sq.ft.				1/ROOM	
NORTH BAY VILLAGE		1/300 sq.ft.			1/BED	1/400 sq.ft.
NORTH MIAMI	1/5 SEATS	1/300 sq.ft.	1/CLASSROOM	1/5 STUDENTS	2/BED	1/4 SEATS
NORTH MIAMI BEACH	1/4 SEATS	4/1000 sq.ft.	1/4 STUDENTS	1/4 STUDENTS	2/BED	2.5/1000 sq.ft.
OPA-LOCKA	1/6 SEATS			1/6 SEATS	1/200 sq.ft.	
SOUTH MIAMI						
SURFSIDE	1/50 sq.ft.					
SWEETWATER	1/3 occupants		0.5/STUDENT			
VIRGINIA GARDENS	1/4 SEATS					
WEST MIAMI	1/4 SEATS				6 SPACES min	
DADE COUNTY	1/50 sq.ft.		TOTAL VEHICLES	1/200 sq.ft.	1/300 sq.ft.	1/250 sq.ft.

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