Parking Matters

DESIGNING, OPERATING, AND FINANCING STRUCTURED PARKING IN SMART GROWTH COMMUNITIES

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Two interns, Janki Patel and Ramond Joseph, contributed the national case study material. Robert Holmes of the NJIT Architecture School edited the case study summaries. Rachel Yoka at Tim Haahs and Associates and Patrick Borowsky and Phyllis McDougle of Fidelco Newark assisted in the production of the report. We are grateful to all those who contributed time and energy to this project: members of the ULI Northern New Jersey Executive Committee and interested parties including the New Jersey Economic Development Authority, the New Jersey Department of Community Affairs, and New Jersey Transit.

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EXECUTIVE SUMMARY

This monograph describes the challenges of financing structured parking in urban areas. It provides information on a wide range of issues affecting the dynamics of design, operations. and financing of parking, and offers a "toolbox" of solutions that developers and policymakers can employ to both commence the project and close the funding gap that may arise in the early years of paying for parking garages in Smart Growth communities.

This information is of interest to everyone involved in planning for downtown parking infrastructure. **Municipal Officials** will find useful the discussion of the pros and cons of managing parking through a parking authority versus a parking utility versus a parking bureau or department. Details are provided as to how to calculate and manage parking fees to create additional parking infrastructure in downtown communities. The report addresses the often-controversial issues of design and aesthetics, offering suggestions as to how to achieve community acceptance of garages while promoting the benefits of shared parking solutions that match specific project conditions. Illustrative examples of how other communities in New Jersey and North America have addressed these issues are provided in numerous case study summaries that help inform the choices available to parking practitioners.

Design and Planning Professionals will take heed of recommendations for changing New Jersey's Residential Site Improvement Standards to better match current census data regarding the demographics of parking in urban communities. Illustrations of alternative parking garage designs provide ideas as to how best to integrate garages into the urban landscape.

Developers will benefit from these findings by reviewing the model ordinances, pro formas, and array of proposed financing tools available to help close the gaps in financing parking structures, particularly in the early years of operation. Graphics such as a "Decision Tree" and the diminishing returns of Payment in Lieu of Taxes (PILOT) agreements provide step-by-step instructions as to which funding tools to use in constructing structured parking in downtowns.

Parking is infrastructure and should be funded as such. Well-planned parking structures help to create vibrant, diverse Smart Growth communities and need not be viewed as an eyesore or major traffic generator. Size matters in planning structured parking; aesthetics do too. In order to be successful, garages must be carefully designed and well-managed from inception throughout their operating life.

Recommendations in this report draw from both existing mechanisms and new ideas for funding parking structures in New Jersey. Suggestions range from utilizing Urban Enterprise Zone funding, Special Improvement District assessments, and sale of development rights to employing New Market Tax Credits and Revenue Allocation Bonds to finance structured parking. New ideas such as dedicating a portion of a gas tax, municipal parking tax, or "Smart Growth Assessment Planning Surcharge" toward financing parking infrastructure are also offered.

The authors of this report, each an expert in the field of parking design, planning, financing or operations, welcome your comments and ideas as to how to implement these strategies in your communities. We hope the tools described herein will facilitate smart parking design and economically viable projects in New Jersey's downtowns.

I. INTRODUCTION

Financing of structured parking has become an urgent issue in the context of urban and suburban redevelopment. Recent legislation and policy decisions in New Jersey have dramatically reduced the ability to develop in the Pinelands, the Highlands, wetlands, and farmlands. Smart Growth strategies embraced by the past three gubernatorial administrations have focused on redevelopment within the more densely developed areas (Planning Areas 1 and 2 as set forth in the State Development and Redevelopment Plan [the "State Plan"]) and movement away from sprawl development in outlying areas. These concepts are embraced in the State Plan as well as in NJDOT's/NJTransit's Transit Village Initiative and Transit Friendly Land Use Planning Program. Population trends are moving toward increased population in urban and suburban centers where there are existing water and sewer, utility, and mass transportation infrastructure.

Smart Growth development often requires structured parking as a significant element of infrastructure. A traditional "rule of thumb" is that structured parking typically becomes economically viable in high-density suburban areas when property values exceed $30 per square foot of building type. In addition, structured parking becomes essential in urban areas because of the underlying land cost. High land costs (usually well in excess of $1,000,000 per acre) require a higher density of development to help defray the land cost; in turn, higher density of development requires structured parking for the most economically effective utilization of the land.

Setting aside land costs, surface parking has a typical cost of $2,000 to $3,000 per space. Structured parking (assuming normal soil conditions) has a range of costs from $15,000 to $25,000 per space above ground (assume an average of $20,000 including soft costs), and $30,000 to $40,000 per space below ground (assume an average of $35,000 including soft costs). Typical revenue (utilizing an average of monthly rate of $150 per space) supports a value of approximately $12,000 to $15,000 per space, and an economic subsidy is typically required in the early years of operation until occupancy is stabilized and monthly rates have matured. Therefore, from a cost and public policy perspective, structured parking needs to be viewed as infrastructure—an investment that acts as a catalyst for future development, with a long-term impact. All too often, it is improperly analyzed as a traditional real estate investment, with unrealistic financial returns and performance expectations.

Sizing of parking facilities is crucial on the one hand to ensure that there is adequate parking but, on the other hand, to ensure that parking is not overbuilt, given the high capital and land costs of parking. It is crucial to get the parking-demand analysis right.[1]

The goal of this study is to review existing models for providing parking and, in particular, structured parking for urban/infill development projects for both transit-related and non-transit-related projects. The relative scarcity of land in many downtown and older suburban locations suggests that structured parking is the appropriate response for medium- and higher-density infill

[1] Notably, from 1978 to 1999 the costs for above-ground structured parking remained in the range of $10,000 to $15,000 per space. However, these costs have significantly increased in recent years due to rising steel costs, increased consolidation, global demand for new materials, and protracted delivery dates in the precast concrete industry; and most recently, overall construction pricing volatility after Hurricane Katrina.

and redevelopment projects. The high cost of land requires significant density of buildout which, in turn, creates additional parking demand. In downtowns and other higher-density locations served by rail, there is parking demand created by transit patrons in addition to the parking demand associated with all the other activities.

Most local zoning ordinances continue to require dedicated, off-street parking for each individual project, thereby missing the valuable potential for shared parking among complementary uses. In addition, the high costs of building and operating structured parking facilities and the minimum economies of scale related to such facilities can compromise or defeat smaller projects and even larger projects in the absence of significant public subsidies in all but the most expensive real estate markets in New Jersey.

This study has led to the conclusion that there are many underused legal and financial tools currently available that would assist in providing parking in mixed-use projects. This study will highlight available tools as well as recommend some new regulatory and financial models that can assist public/private partnerships to achieve the economies of scale necessary to make the provision of structured parking facilities financially feasible in more downtown locations. It is also hoped that local elected officials and parking professionals can benefit from an understanding of a more comprehensive presentation of existing models of financing and careful managing of urban parking facilities.

The breadth of this study has been augmented with the assistance of the Urban Land Institute of Northern New Jersey, which allowed this study to broaden its scope beyond the bounds of New Jersey and consider models throughout the United States. Significantly, while models outside New Jersey are helpful, there are existing models in New Jersey that provide many of the solutions necessary to address parking infrastructure issues.

II. CHALLENGES

Successful implementation of downtown parking facilities faces a number of challenges, both quantitative (regulatory, demand-based and financial) and qualitative (consumers' reactions to the aesthetics and political acceptability of structured parking within their communities.) This section addresses those realities.

1. Quantitative

Shared Parking

Shared parking is receiving increased attention in the context of Smart Growth urban and suburban redevelopment. Its effective implementation is crucial to an accurate analysis of parking demand.

There are two elements to shared parking. Both are intuitive and real. The first element is overlapping trips. Consider the person who drives to a downtown area for work and parks the car. That person may walk to shop at lunch or after work, walk to a restaurant for lunch or dinner, attend the theater or some other social event in the evening. In this case, there is only one car trip and one parking event, yet many distinct business transactions are possible.

The second element is non-competing parking needs. In a sense, it is reminiscent of the windfall achieved from selling ice in the winter. For example, residential tenants park in a parking facility at night, typically between 7:00 P.M. and 7:00 A.M. They take their cars to work elsewhere, and those spaces are available to meet the demands of office, retail and commercial tenants who typically require parking from 7:00 A.M. to 7:00 P.M. The result is that 300 parking spaces in a downtown context may fulfill the parking demands of both residential and nonresidential users that would require 400 to 500 parking spaces in a greenfields context.

Take, for example, Headquarters Plaza in Morristown, New Jersey. The project was developed from 1978 to 1984. Parking was established based on a typical office demand of five spaces per 1,000 square feet, retail demand of five spaces per 1,000 square feet, and miscellaneous demands, including a 10-screen theater facility, assuming each use is stand-alone and constructed in a greenfield, with all parking demand factors apply at the same time.

Headquarters Plaza, Exterior, Morristown, New Jersey

Headquarters Plaza Garage, Interior, Morristown, New Jersey

Simple out-of-the box considerations would have resulted in a conclusion that parking demand for movies and parking demand for office use are almost perfectly complementary. Nevertheless, 3,000 parking spaces were constructed to serve the project and, on any given day, there are probably some 1,000 parking spaces that are never used. That equates to two acres that could have been used for additional development or open space. The capital cost at that time was $10 million for those parking spaces, portions of which were borne by the Town of Morristown, with the other portion borne by the commercial redeveloper.

There is a variation on this complementary parking construct in transit-friendly developments. Given the recent trend in such developments, there is more anecdotal than statistical data available, but it is intuitive and appears to be proving accurate. Thus, consider a Transit Village project with one- and two-bedroom residential units. As is typical in New York City, some couples may choose to have no car instead of one or two cars, instead renting a car on an as-needed basis. In this context, there are emerging car-share businesses such as Zipcar® that make rentals available on an hourly or as-needed basis. These systems are prevalent in the urban

centers of Seattle, Chicago, New York, and Philadelphia.[2] Their emergence in Princeton, New Jersey suggests their viability in certain smaller downtown markets similar to transit villages. Notably, the car-share vehicles are often stored in structured parking.

Transit Village parking patterns do cause some shared parking complications, particularly in relation to residential users. When commuters arrive in the morning, residential parkers often have not left for work and therefore have not yet vacated their spaces. This complication can be resolved through management practice. Given that higher daytime demand would trigger a change to a higher rate at, say, 8:00 A.M., residential parkers would have an incentive to vacate before that time and make the space available for commuters.

Valet parking is also emerging in transit village downtowns such as Summit, NJ. If a commuter finds a garage to be full at the AM peak, they can park in a holding area and leave their keys with an attendant, who then parks their vehicle when space opens. Anecdotal evidence suggests that many drivers might welcome valet service and not perceive it as an inconvenience.

Planners must also assume a higher daytime parking occupancy rate for residential parkers who own cars but utilize mass transit and leave their cars in the residential lot during the day. In environments such as New Jersey, the car is still necessary for non-work trips. As a result, commuting transit village dwellers may create greater demand for parking than the complementary parking needs in a non-transit-oriented downtown project. Again, this is a natural market that can be satisfied as car sharing becomes more prevalent.

Anecdotal evidence suggests that many drivers might welcome valet service in shared parking situations and not perceive it as an inconvenience.

Local zoning codes typically trend toward assumptions based on greenfields development and, as a result, create an oversupply of parking when they fail to consider shared parking concepts.[3] We urge planning and zoning officials to recognize and embrace the need for and value of creative shared-parking solutions based on specific anticipated occupancies of the projects contemplated for that development area.

Residential Site Improvement Standards (RSIS)

The Residential Site Improvement Standards mandated by an Act of the New Jersey Legislature in 1993, adopted in 1997 and readopted in 2002, are better than typical code requirements, but still not sufficiently flexible. Notably, RSIS does not apply to integrated mixed-use projects.

[2] Clayton Lane, "Philly Car Share: First-Year Social and Mobility Impacts of Car Sharing in Philadelphia." Paper delivered at Transportation Research Board, 84th Annual Meeting, 2005, pp. 3-13.

[3] Donald Shoup, *The High Cost of Free Parking* (Chicago: American Planning Association, Planners Press, 2005).

> {W}here both residential and commercial development are planned in a mixed-use development these rules shall apply to the residential part or parts of such development where such residential part or parts are discrete and separate from planned commercial parts as evidenced by; for example, separate building(s), separate parking, and separate access features.

Thus, where uses are physically mixed or integrated, RSIS does not apply.

In addition, N.J.A.C. 5:21-4.14, Parking: Number of Spaces, recognizes in general terms that:

> (c) Alternative parking standards to those shown in table 4.4 shall be accepted if the applicant demonstrates these standards better reflect local conditions. Factors affecting minimum number of parking spaces include household characteristics, availability of mass transit, urban versus suburban location and available off-site parking resources.

This provision helps, but it does not go far enough.

Subsection (e) is also helpful:

> (e) When housing is included in mixed-use development, a shared parking approach to the provision of parking shall be permitted.

Over the past year planning boards in Maplewood, Morristown and Manville, New Jersey, among others, have approved projects using demonstratively lower parking standards or shared-parking concepts.

Planning and engineering communities, as well as the various members of local Planning Boards and Zoning Boards of Adjustment, have worked in a greenfields context for the last 50 years and may not have sufficient knowledge of how to best implement alternative parking standards. We hope that this study will help increase the awareness and value of careful consideration of shared parking concepts. We urge careful review of and revision to the RSIS standards based upon concepts presented in this study and in other emerging studies addressing shared parking in mixed-use, Smart Growth contexts.

Various RSIS standards address parking space size and establish a minimum of 9 feet by 18 feet. There is no quarrel with the 18 feet in length, but, depending upon the use and incline of the parking surface, an 8½-foot width can often reasonably and appropriately service parking demand. Some structures go to 8 feet if turnover isn't high. In a structured facility, depending upon the configuration, that difference may yield a premium of 6 percent of the parking spaces. At $20,000 per parking space, 6 percent can become a meaningful contribution toward a self-liquidating facility.

2. Financial

The rapid diminution of available developable lands in New Jersey is a product of (1) the fact that New Jersey is the most densely populated and most highly developed state in the United States, and (2) the increasing prohibitions against development in environmentally sensitive areas. These factors contribute to spiraling increases in land costs. The trend toward redevelopment has further contributed to increasing land costs in urban and suburban areas.

Global competition and increasing energy costs have fueled rising construction costs. High land costs and high construction costs create a challenge to construct parking facilities that can generate sufficient revenues to support amortization of debt service for construction costs and operations and maintenance costs.

Financing a Structured Parking Component of a Mixed-Use Development

The "model" pro forma included as Appendix V illustrates the challenges of financing a relatively straightforward structured parking component of a mixed-use development. Based upon an "average" developed cost of $25,000 per space in an urban area and the other assumptions set forth in the pro forma for a mixed-use project of 100 residential units and 200,000 square feet of Class A office space, the parking structure does not have positive cash flow until after several years of operation, when rates have matured and usage has stabilized. The various models presented in this report provide partial or whole solutions to achieving self-liquidating parking facilities despite the rising costs experienced in recent years.

3. Qualitative

While this document focuses primarily on strategies to overcome financial hurdles, there are other qualitative hurdles that must be overcome to build structured parking. Some Smart Growth planners find providing parking contradictory. On the one hand, Smart Growth should promote dense, pedestrian-based communities as an antidote to auto-dominated sprawl. On the other hand, people will drive downtown, creating a need for adequate parking. We believe that Smart Growth must never simply be dogmatic theory but a workable long-term strategy toward greater livability. It cannot be achieved overnight; it must be applied in a measured, flexible way that is affordable and that communities can endorse.

In New Jersey, the car will continue as the principal means of choice for mobility for years to come. Today, nine of ten trips are taken in a car. New strategies must accommodate automobiles in a manner that supports the other ideals of Smart Growth. Transitional measures that utilize intelligent and equitable strategies must be developed in concert with those that promote transit as an increasingly viable *option* to driving and not as a forced *substitute*. Accommodations must balance the needs of drivers with those of pedestrian mobility, all while maintaining appropriate urban density.

Transit-Oriented Design

The type of community this report profiles is similar to a Transit Oriented Development (TOD). Peter Calthorpe describes TOD as "a mixed-use community within an average 2,000-foot walking distance of a transit stop and core commercial area. TODs mix residential, retail, office, open space, and public uses in a walkable environment, making it convenient for residents and employees to travel by transit, bicycle, foot, or car."[4] Some people overlook the fact that many Smart Growth communities have all these attributes *without* a transit facility. In New Jersey, Red Bank's Main Street and Morristown's Green are notable examples even though they are up to one mile or more from a station.

In these cases, parking plays the same role as a transit facility where people follow a "park once" strategy. Once parked, they can travel on foot to "a mixed-use community within an average 2,000-foot walking distance . . . to residential, retail, office, open space, and public uses."

[4] Peter Calthorpe, *The Next American Metropolis: Ecology, Community and the American Dream.* New York: Princeton Architectural Press, 1993. p.56.

Because parking in a garage requires some effort, visits to stores, offices, and other institutions are usually grouped, which enhances street activity. Because "park once" practice discourages multiple short trips, congestion is reduced and fewer emissions enter the atmosphere. Rather than promote banal environments such as highway strip malls that are often associated with the automobile, well-planned parking can create a Smart Growth community, even without the transit component.

TODs typically follow three principles: density, diversity, and design. These can also be applied to communities oriented to Smart Growth parking strategies. The application of these principles inflects the TODs in subtle ways. More important is how the principles affect the structures themselves.

Density in a TOD is necessary to provide sufficient population to attract and support amenities. Ideally, the phenomenon snowballs as amenities attract even more people, thus attracting other amenities. Unlike automobile traffic, congestion is not a pejorative to a pedestrian. The "culture of congestion" is how the Pritzker Prize–winning architect Rem Koolhaas describes the throngs that continue to frequent Times Square in Manhattan, whose numbers suggest there is no limit except the capacity that police sanction. While the automobile ideally takes on lesser status in a vibrant pedestrian environment such as this, its accommodation remains essential; Times Square has many large garages nearby.

That structured parking downtown creates congestion is a fallacy. Upwards of 30 percent of downtown drivers are cruising for parking. If they immediately sought the assurance of parking in a garage, they would avoid clogging the streets.

Structured parking's *raison d'être* is tied to the metrics of density. Joel Schwartz of Landmark Development argues that when densities exceed 20 units per acre in a downtown New Jersey development, structured parking becomes necessary.[5] Robert Dunphy of the Urban Land Institute (ULI) uses the threshold of $30 per square foot to be the point at which structured parking becomes economically viable. Especially where structured parking replaces surface parking, its development follows the planning principle of highest and best use. The myth that structured parking downtown creates congestion is a fallacy. Upwards of 30 percent of downtown drivers are cruising for parking. If they immediately sought the assurance of parking in a garage, they would avoid clogging streets.

Indeed, density is arguably the most difficult Smart Growth virtue to promote in the smaller downtowns of New Jersey. It requires resolve to dispel disbelief that higher density makes places more livable. No matter how many examples of Hoboken, Boston, or Portland are shown, many cannot transpose these values on their own communities. Structured parking is often a flashpoint. Edmund O'Brien, the mayor of Metuchen, describes structured parking using the "D word" (density) as if it were a profanity unspeakable to his constituents. To them, even its mention threatens the idyllic village with becoming urban, and urban has only negative connotations—crowding, crime, and bad schools, not the positive ones that Smart Growth promotes—urbanity, amenity, and choices. To replace the negative stereotype with the possibility of the positive can be achieved only with a combination of political will and vision.

[5] Joel Schwartz, Landmark Development. Seminar Presentation, New Jersey Institute of Technology, Newark, New Jersey, November 8, 2004.

Diversity gives the Smart Growth community its livability: the more heterogeneous, the more vitality it holds. Used as an adjective, "diverse" in a Smart Growth context serves many nouns: land uses, retail, office and housing types, income, age and racial groups, and mobility options, to name a few. The absence of housing and limited access except by automobile make the suburban mall less diverse than the downtown, despite the mall's often high-density and high-design quality. Promoters of downtowns, such as James Howard Kunstler, disparage the mall for its homogeneous banality: the inside of any mall is interchangeable, it could be anywhere.[6] In contrast, a diverse, Smart Growth downtown is unique to that place.

Structured parking adds diversity by allowing the automobile to coexist with other forms of mobility, in contrast to sprawling surface parking, which inhibits other mobility, notably pedestrian. When parking structures become a destination, and a "park once" policy is employed, it encourages linking pedestrian trips to a variety of venues. Structured parking actually thrives in Smart Growth environments when shared parking practices can be employed. Multiple revenue streams lead to greater income and a greater possibility for the facility to be self-liquidating. The diverse users of New Brunswick's Ferren Deck have been critical to its profitability. While it might be impractical to differentiate the parking structure's interior, which is generic, the success with which a structure integrates a diversity of adjacent or even abutting buildings has much to do with its acceptance by a skeptical community. The Spring Street Garage in downtown Princeton is an excellent example.

Ferren Deck and Mall, New Brunswick, New Jersey

Spring Street Garage, Princeton, New Jersey

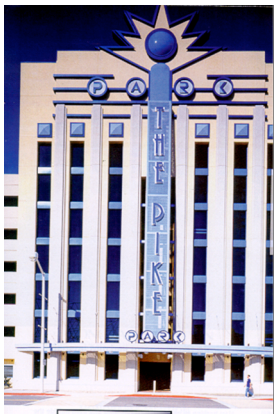
Design involves aesthetics. Because of this, it is probably the area of least agreement among Smart Growth planners. Some, such as the New Urbanists, advocate a return to nineteenth-century architectural styles, arguing that this is consistent with downtowns, which derive from the same era. New Urbanism critics claim that this is nothing but homogeneous packaging or branding that violates the diversity principle. While these differences often transcend polite disagreement, most Smart Growth planners agree that consideration should be given to urban environments and how the individual building relates to the ensemble. While people may

[6] James Howard Kunstler, *The Geography of Nowhere: The Rise and Decline of America's Man-Made Landscape*. New York: Touchstone Books, 1994.

differ over whether buildings should harmonize or provide a unique dissonant response, they agree that what is to be avoided is negligent expediency.

Parking is all too often built with negligent expediency. Its construction is typically an afterthought, not at the forefront of design issues. In an issue devoted entirely to parking, the journal *Architecture* opens with the remarkable statement that "parking occupies a passive place in the collective consciousness. Most people want garages and surface lots to be readily accessible, but invisible; they think of them as necessities, not amenities."[7] Unless we bury them, which doubles cost, there are few conjurors practicing as architects today that can render them invisible, for they are by far the largest structure in a downtown, dwarfing everything that surrounds them. They also connote the sinister; their consistent use in film thrillers as the setting of unseemly activities suggests our collective, subconscious fear of them.

To succeed, parking structures must fit a site properly. In downtown environments, streets are "urban rooms" with the main street the most important, a kind of living room. If possible, garages should limit their exposure to these "rooms" and locate behind the line of buildings that make up the street. But few older downtowns have the luxury of this much space, minimally a footprint of 125 feet by 300 feet. Where garages must have street frontage, planners should avoid locating them on the principal downtown street, and the shortest dimension is preferable to expose. In a downtown of taller buildings, a parking structure can be rather tall, but in a downtown of predominantly 3-story walk-ups, a parking structure should never be the tallest structure.



Structured parking should engage with its surroundings. There are many cosmetic strategies that can be deployed, but few are universally acceptable. Strategies that are more successful than others are introducing scalar elements, such as window-like openings to break down a garage's mass. Since a garage's proportions are overwhelmingly horizontal, the introduction of a vertical orientation creates a commonality between it and the typical downtown building, which is taller than wide.

Many garages are clad with a false façade. This outrages architectural purists, who decry their "Potemkin Village" quality and maintain that because everyone knows they are fake, they attract more attention. They liken this to the cell phone tower clad as an ersatz pine or cactus. Others do not share this aversion. Recently, in New Jersey, the Village of Ridgewood's Council unanimously approved a controversial garage design with active retail at grade and false building fronts above. Some of these false fronts are not without a

[7] *Architecture* (February 2001), vol. 90, no. 2, p.65.

sense of humor; a garage façade made to appear like the grille of a Rolls Royce is a popular landmark in Chicago's downtown. Beauty is in the eye of the beholder; each community should design how its garages engage with its downtown surroundings.

Two examples in Miami demonstrate differing approaches to creative design. In the first (at left), the "art deco" stylistic choices, palette of pastels, and softening of required openings seem to fit into the community while not concealing the function of the structure. In the second (right), the garage engages the streetscape by attempting to disguise its function through a camouflage of faux window boxes and lattice work.

Two different creative garage designs in Miami, Florida.

An alternative cosmetic strategy designed primarily to disguise is to attempt to cover parking structures with natural material. This strategy has been executed with varying degrees of success.

Two other examples, shown below, are the Miami Beach Garage, where the climate is temperate year-round and the ivy selection is appropriate, contrasted with the Prudential Parking Deck in Woodbridge, New Jersey. In the second case, seasonal climate differences prohibit the ivy from surviving, and the ivy remaining at ground level is a permanent condition.

Miami Beach garage at Seventh and Collins Avenue.

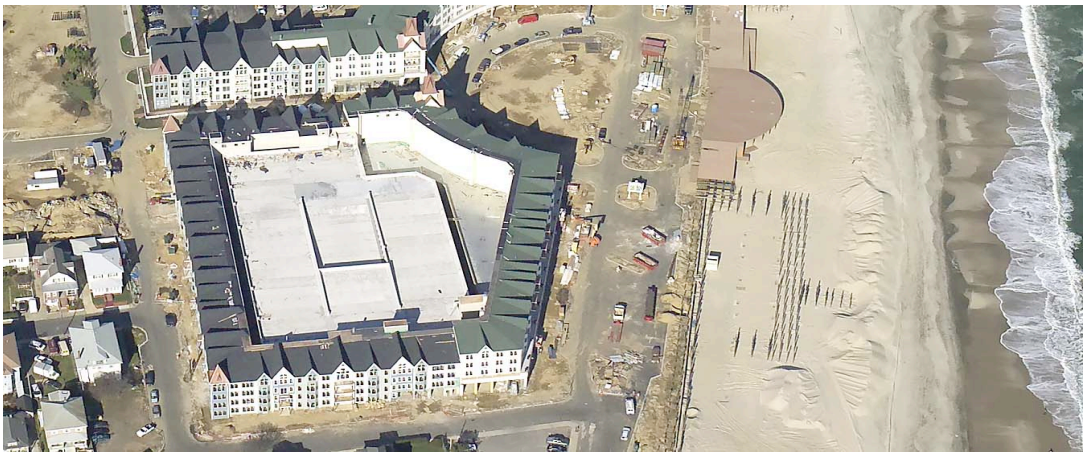
Prudential parking deck, Woodbridge, New Jersey.

"Hybridizing" a garage with other programs is the best strategy of meeting not only the design principle but the diversity principle as well. At a minimum, a downtown garage should include retail at grade so that those passing by look into shop windows and not into a fluorescent-lit, cavernous garage. A residential program 40 feet in depth or an office program can be designed to buffer a garage's mass from the street. In this way, a false façade can be replaced by a real one.

A fine example of the best principles is found in Princeton, New Jersey, where the structure integrates with existing and new housing, a new library, and a new urban plaza that is connected to a network of charming pedestrian alleys. Although New Urbanist by design, the attention paid to the structure's integration elicited approval even from the architectural purists. In a design presentation made to the community, the project received a major boost when the Dean Emeritus of the Princeton University School of Architecture, himself known for a career of modern work, declared simply, "I like it!"

A mixed-use design—Spring Street Garage, Princeton, New Jersey.

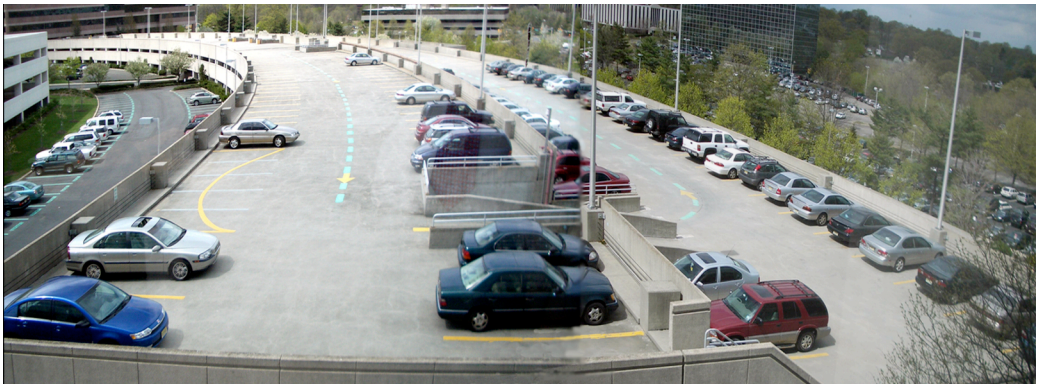
An excellent example of both hybridizing and disguising is at the Pier Village Deck in Long Branch, New Jersey. In the image below, one can see that the parking deck is essentially entirely wrapped primarily with housing, creating an effective hybrid while making the deck completely invisible to the streetscape.



"Wrapping" mixed-use development around structured parking: Pier Village, Long Branch, New Jersey.

Size matters, particularly with respect to parking facilities. Size matters from an economic point of view, but it is also important from a physical point of view. As noted, parking needs to be just about right—not overbuilt, not underbuilt. Obviously and simply put, a smaller parking facility is more sellable than a larger parking facility.

Size matters with respect to parking facilities. A smaller parking facility is more sellable than a larger parking facility.



"Overbuilt" garage at Metropark, New Jersey, corporate office building.

About Mechanical Garages

There has been recent renewed interest in mechanical or robotic parking garages largely brought about by a well-organized and financed marketing campaign. Mechanical garages in the United States can be traced back to the 1930s, 1940s, and 1950s, and quite a few were developed in Chicago, New York, and Boston during this period. However, many were plagued by mechanical problems, breakdowns, issues with oil drippings, and vehicle processing times. As a result, the structures began to lose favor. But, the biggest blow to the industry occurred when the Wall Street community refused to underwrite financing of the structures due to the ongoing problems, a refusal that continues to this day.

Since then, only two mechanical garages have been developed in the United States—one in Washington, D.C., and one in Hoboken, New Jersey. The Washington garage is a private facility that holds 74 cars and serves an upscale apartment building. The Hoboken garage is a 324-space public facility that is run by the Hoboken Parking Utility. The development and operation of the Hoboken facility has been a disaster from the beginning. The project has been tarnished by lawsuits, finger-pointing, cost overruns, and accusations of corruption. Among the major issues: It was completed three years behind schedule; it suffers frequent breakdowns; and customers sometimes have to wait more than an hour to retrieve their cars. Two cars have been dropped and heavily damaged by the machinery.

Mechanical garages are operating with some success in Japan and Europe. However, until they are proven to be dependable and financeable in the United States, it is believed that this option should be avoided.

Political Realties

Abraham Lincoln is quoted as having said, "You can't fool all of the people, all of the time." Political reality says you can't please all of the people all of the time, and it is important that decision makers recognize this reality. Ultimately, the responsibility of elected and appointed officials is to do that which presents the greatest good to the community as a whole, recognizing that someone's interest may be sacrificed—but that is the essence of democratic government. Indeed, New Jersey's Local Redevelopment and Housing Law has a specific prohibition against referenda because of the Legislature's recognition that such questions require careful deliberation, public comment, and broad-based decision making. These are complex processes and decisions that are not easily subjected to a yes or no, up or down vote.

The "NIMBY" ("Not In My Backyard") or the "CAVE" dweller (Citizens Against Virtually Everything) phenomena are not limited to greenfields development. Individuals can find fault with the best-planned and conceived urban and suburban redevelopments. Change is often perceived as something bad. It need not be bad. Indeed, it can be good—even great.

One mayor and council the authors have worked with in New Jersey recognized that they could be most effective in implementing a redevelopment project if they were able to be reelected on a routine basis. Fortunately, they were successful in that endeavor and therefore successful in their redevelopment efforts. But factors like stability, continuity, open-mindedness, leadership, courage, vision, and commitment are crucial in effectuating intelligent redevelopment projects.

One example of the political nature of financing structured parking is illustrated in the Westfield, New Jersey, case study. For a period of more than ten years, the Town of Westfield conducted a planning process to analyze parking demand and parking solutions within the town. During the course of the process, the mayor changed and, in one election, a member of the governing body was replaced. The new governing body was determined to take a different course. It acquiesced to the demand for a referendum, and although the Local Redevelopment and Housing Law prohibits referenda, the governing body determined to proceed with a non-binding referendum. With the difficulty of presenting a question as to how a redevelopment process should proceed, the referendum was soundly defeated and the governing body determined not to proceed with the redevelopment process. This was after both the Town and the commercial redeveloper invested substantial sums. The absence of stability in the governing body and the loss of leadership resulted in the demise of long-planned and reasonably conceived downtown mixed-use projects, which would have included structured parking.

4. Parking System: Operating a Parking System versus Providing Parking

Virtually all municipalities recognize the importance of providing on- and off-street parking for residents, visitors, shoppers, and persons employed within their cities. However, not every municipality realizes the importance of integrating all aspects of providing public parking within the framework of a "parking system." In many municipalities the elements of a parking system are compartmentalized, and essential parking functions are performed by individual

departments within the local government. For example, parking enforcement is often the responsibility of the police department (PD); meter maintenance and repair is handled by the public works department (DPW); meter revenue and parking fees are collected by the finance department; resident permits are issued by the city clerk's office. Meter placement and parking fees and rates may be set by the governing body of the municipality.

When parking functions are divided among multiple city departments, no single person is responsible for planning, managing, operating, or delivering municipal parking services to residents and the public. Parking revenues, though collected, deposited, and accounted for by the municipal finance department, are usually not allocated to specific collection zones or off-street parking lots. Consequently, if parking revenues decrease, it is difficult to pinpoint the reason for the decline. Conversely, if the reason for a decline in parking revenue can be attributed to parking meters in need of repair or a lack of enforcement in a particular meter zone or parking facility, the finance department does not have the authority to correct the problem but must coordinate and request assistance from the DPW or PD.

Another issue associated with the delivery of parking functions and services by multiple city departments is that the municipality often does not know the actual cost of providing public parking or the net revenue derived from parking fees. When parking services are decentralized and provided by multiple city departments, no department head or city official ever prepares a unified parking budget to determine how much manpower, salary and wages, equipment, supplies, vehicles, gas, maintenance costs, insurance, utilities, snow removal, salt and sand, and outside contractor expenses are actually attributed to providing parking services. Consequently, if a municipality does not know the actual cost for operating, maintaining, repairing, enforcing, and collecting from its parking facilities, it cannot know the net revenue derived from parking fees, or whether its parking fee structure is appropriate.

If a municipality does not know the actual cost for operating, maintaining, repairing, enforcing, and collecting from its parking facilities, it cannot know the net revenue derived from parking fees, or whether its parking fee structure is appropriate.

The most efficient and effective way to provide parking services to municipal residents and the general public is through a parking system. In this context the term "parking system" means the delivery of municipal parking services to the public by a single government entity charged with responsibility for managing, planning, and operating all individual aspects or functions (enforcement, collection and repair) of on- and off-street parking services.

The State of New Jersey has 30 parking authorities, more than any other state in the nation.

There are three types of government entities that manage and operate parking systems within the state of New Jersey: parking authorities, parking utilities, and parking departments/bureaus. Each of these entities has its strengths and weaknesses. The State of New Jersey has approximately 30 parking authorities, surpassing any other state in the nation. For a more detailed description and comparison of these government entities and their operational advantages and disadvantages, see ***Appendix W.***

III. PARKING GARAGE TOOLBOX: CASE STUDY SOLUTIONS

This section highlights a range of options and tools that can be used to effectively finance structured parking in urban and suburban ring areas. It describes existing tools used in New Jersey and elsewhere in the country and outlines several public- and private-sector suggestions for financing future projects in the state. This section includes a diagrammatic summary of the "tool box" of funding options for structured parking and concludes with a decision-tree model to help practitioners assess what models may work best for their particular circumstances. All case studies referred to in this section are described in more detail in summaries and worksheets provided at the end of this report.

1. Revenue Bond Financing

Virtually all municipal bonds (munis) for public parking improvements are tax exempt. The exception is the 10 percent tax rule created by the Tax Reform Act of 1986, which dictates that no more than 10 percent of a tax-exempt funded parking project can be dedicated to or reserved for a single private purpose. Nonprofits, such as hospital or university parking facilities built by a municipality, parking authority, or improvement authority, are not affected by the 10 percent rule. Consequently, it is important for a municipality or parking authority to remember that no more than 10 percent of any parking facility may be dedicated to any one private enterprise, if it wishes for its municipal bonds to be entirely tax exempt. However, a municipality or parking authority may issue both taxable and tax-exempt bonds for a single project to satisfy the parking needs of a single private user in excess of 10 percent of the project's available parking spaces.

Project Test

One of the most common methods of raising capital for parking garage construction is *revenue bond financing*. Revenue bonds are an effective choice when the parking garage being constructed will be charging fees for parking. The net income from the parking garage is pledged toward repayment of the bonds.

If the annual projected net income of the project is sufficient to cover the annual debt service payment on the bonds, the project can qualify as a *project test*. In these cases, the hourly, daily, and monthly fees are normally set at levels that will generate income in excess of debt service. Such conditions exist in dense urban areas with prevailing high parking fees, such as New Brunswick or Hoboken.

See Case Study: Paterson Street Garage Expansion.

System Test

If the annual projected net income of a project is not sufficient to cover the annual debt service payment on the bonds, additional sources of revenue need to be dedicated to pay debt

service. Because these conditions often exist within parking systems, such as parking authority parking systems, these bond issues are known as *system tests*. In many cases, the additional revenue comes from other parking facilities in the public parking system, such as parking lots or on-street parking meters. Collectively, the projected net income from the project plus the projected net income from the other dedicated public parking facilities are shown to exceed the debt service load. In these cases, the hourly, daily, and monthly fees are normally set at levels that are consistent with prevailing fees charged in the downtown. Such conditions exist in many urban and suburban centers throughout the states where modest fees are charged for parking.

One example of a successful system test is in Morristown, New Jersey. The governing body of Morristown established the Morristown Parking Authority in 1956. The creation of the parking authority established a self-liquidating parking system whereby all parking revenues are committed to maintenance and expansion of the parking system. This includes construction of the Ann/Bank Parking Garage in 1984, the Dalton Parking Garage in 1999, the Vail Mansion Parking Facility currently under construction, and the Maple Avenue Parking Facility to support the Epstein's Redevelopment Project, which was anticipated (at the time this report was prepared) to commence construction in the spring of 2006. All of these parking structures have been supported by the parking system, which includes on-street parking revenues.

See Case Studies: John L. Dalton & Maple Ave.; Garages, Epstein Redevelopment Project.

Hybrid Test

When project parking revenues or system parking revenues alone are not sufficient to cover debt service and operating expenses, other sources of revenue can be pledged to fill the gap. This may be the case in smaller parking systems or those that charge low fees. This may also occur when parking or parking-related revenues such as on-street meter income or parking fine income is already pledged to the municipality's general fund to balance the budget.

Examples of "other revenue" sources to fill the gap include rent from grade-level retail, air rights lease, ground lease, or Payment in Lieu of Taxes (PILOT).

See Case Study: Rahway Transportation Center Garage, Rahway, New Jersey.

Guaranteed versus Stand-Alone

When the municipality or another public entity with taxing powers resolves to subsidize debt-service payment shortfalls in times when the projected pledged or dedicated revenues ever fall short, the revenue bonds are known to be *guaranteed* or *backed*. Because of the additional security that is realized from this condition, the bond ratings are generally high and the cost of borrowing—the bond interest rate—is generally lower.

When the only source of income that is pledged to pay debt service is the revenue of the project or the revenues of the project plus other parking facilities in the system the bonds are known to be *stand-alone*.

See Case Study: Morgan Street Garage, Hartford, Connecticut.

Parking Revenue Bonds—State-Issued

To our knowledge, the State of New Jersey does not issue parking revenue bonds to finance parking-garage projects. However, the State of Connecticut does. The State of Connecticut, through its Department of Transportation division, recently financed the construction of an airport parking garage in this manner. Additionally, the garage was delivered in a Design–Build–Operate–Manage (DBOM) format. In a unique arrangement, the bonds are guaranteed by a private entity.

The successful bidder for this project was an entity called ABPC, a limited liability company formed by the national parking operator APCOA. Under a lease agreement with the State, the proceeds of the March 2000 bond issue were used to finance the construction of a 3,450-space parking garage located directly adjacent to the main airport terminal building. The bond issue was sized using a GMP (guaranteed maximum price) submitted by ABPC. The ABPC team designed and constructed the garage to standards set by the State, using the finite bond issue funds. After completion of the garage, the State then leased the garage to ABPC to operate and manage in accordance with performance standards set by the State.

ABPC uses revenue from the parking garage to cover its lease payment to the State and its audited operating expenses. The remaining funds are split between ABPC and the State. If the lease payment plus revenue-share income to the State is ever not sufficient to cover debt service, ABPC must fund the shortfall. To reduce the risk of this occurrence, the State has agreed to divert other airport parking activity to the garage if and when financial projections indicate a potential shortfall.

See Case Study: Bradley Airport Garage, Hartford, Connecticut.

2. Tax Financing

Municipal Additional Tax Assessment

A municipality may levy an "additional" assessment upon private property in proximity to a parking facility (lot/garage), for a period of up to 20 years, in order to repay the expense of land acquisition, hard construction, and soft development costs associated with building a parking facility and the cost of parking equipment.

Parking facilities are identified in New Jersey State statutes as local improvements for which an additional assessment may be imposed by a municipality.

New Jersey Statute 40:56-1 et. seq. regulates local improvements made by municipal governments and the imposition of an assessment upon real estate in the vicinity thereof, based upon the proportionate benefits derived by private property. Parking facilities are specifically identified in N.J.S.A 40:56-1.1 and 1.2 as local improvements for which an additional assessment may be imposed by a municipality.

N.J.S.A. 40:56-1.1 states the following:

> Any municipality may undertake, as a local improvement, the work of providing facilities for the parking of motor vehicles by the acquisition and improvement of real property and by the construction of buildings and structures. Any such acquisition may be by purchase or lease and the parking facilities may include equipment, entrances, exits, fencing and other

> accessories necessary or desirable for the safety and convenience of the parking of motor vehicles.

N.J.S.A. 40:56-1.2 further states that an additional assessment may be made by the municipality "in furtherance of any project of a parking authority . . . pursuant to said parking authority law," or "in connection with the creation of a parking authority." Funds for the public parking facility may be appropriated by the municipality from the annual tax budget as a capital improvement or funded by bond anticipation notes or permanent bonds (N.J.S.A. 40:56-13 and 35).

Upon completion of the construction of the public parking facility, all costs associated with the financing, public advertising, engineering, land acquisition, and construction (hard and soft costs) of the local improvement must be detailed and certified by the municipality/parking authority to the local assessment officer (N.J.S.A. 40:56-24), or to a general board of assessment if such a board has been created by the governing body (N.J.S.A. 40:56-21–23).

The assessment officer or board of assessment then determines the private properties positively affected by the public parking facility. After this, the affected property owners are given written notice, by mail, of the time and place for a public hearing to determine the assessment to be levied upon their private property for the advantage or increase in value that the respective lots or parcels of real estate have received by reason of the parking-facility improvement (N.J.S.A. 40:56-27). It is the authors' understanding that this type of assessment has not been used in New Jersey in recent memory; however, it is a potential tool to tap into.

3. Qualitative/Parking System

There are several parking solutions that are considered supplemental or enhancement approaches to addressing the challenge of funding structured parking. These include Payment in Lieu of Parking ("PILOP"), hybrids (bonds/cash/rents), and various developer incentives to encourage inclusion of public parking in private-sector development projects. These are described in more detail below.

Payment in Lieu of Parking (PILOP)

The high cost of providing surface or structured parking facilities in urban environments, (i.e., land acquisition, soft-cost development fees, and construction hard costs) often affects project feasibility and results in developers requesting waivers from municipal parking requirements. Even allowing for shared parking and transit-oriented development (TOD) parking credits, a project developer may still seek parking waivers.

A municipality that adopts an ordinance that implements a program for a PILOP offers a developer the option to pay a fee for each waived parking space, in lieu of providing the number of parking spaces required by local land-use ordinance. The municipality or parking authority utilizes the PILOP fee to construct a public parking facility available to the user or occupants of the development project, as well as to the general parking public.

By instituting a PILOP program, a municipality creates a mechanism for the municipal planning board to waive parking requirements without burdening the resident taxpayers. By making the PILOP, the developer is given the opportunity to maximize the permitted development uses of the property. The urban municipality with a PILOP program fosters redevelopment, gains a new tax ratable, and receives a PILOP fee to construct a public parking facility in concert with the city or parking authority's parking master plan and public parking needs.

The benefits of adopting a PILOP program are:

- Consolidation of multiple small and single-user parking facilities into a larger, strategically located public parking facility
- Developer flexibility
- Sharing of public parking facilities by multiple users
- Opening of private parking facilities to other than users generated by the owner's development project
- Reduction or elimination of parking variances granted by a municipality
- Creation of a level playing field, where all developers contribute to and share public parking
- Providing a funding mechanism for public parking improvements and facilities

PILOP programs have been adopted in 11 U.S. states as well as in Canada and Europe. New Jersey cities that presently have PILOP ordinances are Fair Lawn and Fort Lee, although they have not been utilized. To meet development project parking requirements, the City of Rahway Parking Authority (RPA) is presently assessing a developer a PILOP fee of $2,500 for each public parking space provided off-site by the RPA, to satisfy the development project's parking requirements.

See Case Study: City of Rahway Parking Authority, Rahway, NJ

PILOP programs are in effect in at least 12 cities in the State of California, where PILOP fees range from $3,132 to $50,994 per parking space. The average California PILOP fee ranges from $6,000 to $9,000 per space.

PILOP programs are also in effect in Orlando, Miami, and Miami Beach, Florida. The PILOP fee for Miami's Coconut Grove is $4,500; in the South Beach area of Miami Beach, the fee is $15,000 per parking space.

PILOP fees collected by the Coconut Grove Parking Trust Fund, operated and administered by the Miami Parking Authority, contributed $2.5 million to the total land acquisition cost for the Oak Avenue (G8) Parking Garage project.[8]

See Case Study: Oak Avenue Garage, Coconut Grove, Florida.

[8] For a more in-depth discussion of PILOP programs, see Donald Shoup, *The High Cost of Free Parking*, ch. 9, "Public Parking in Lieu of Private Parking," pp.229–50 (Chicago: American Planning Association, Planners Press, 2005).

Rental Income Subsidy

Rental income from office and/or retail components added to public parking garages may also contribute to subsidizing the operational expenses or debt service payments of a parking structure. City planners often request that retail, commercial, or office components are added to parking structures as "liner units" on grade and at the second story to enhance streetscape and break up the monolithic architectural presence of the parking garage.

In those communities where the parking structure is centrally located within the central business district (CBD), or is the primary parking resource in an active commercial district, or is adjacent to an urban rail station, the commercial/office components are often desirable and command high market-rental rates. New Jersey's Parking Authority Statute N.J.S.A. 40:11A et seq. specifically authorizes parking authorities to act essentially as redevelopment agencies and to develop separate or integrated mixed-use components such as residential, office, commercial, retail, and service into a parking project to assist in subsidizing the cost of a parking project's land acquisition, operation, maintenance, repair, restoration, and debt service expenses [N.J.S.A. 40:A-6.4(c)(d)(f) and .5]

The City of New Brunswick, recognizing the extraordinary powers granted its parking authority by N.J.S.A. 40:11A, authorized the New Brunswick Parking Authority in 1981 to expand the existing Ferren Deck, which fronted on Paterson Street directly opposite the Middlesex County courthouse and administration buildings. The expansion of the existing Ferren Deck into the Ferren Mall and Parking Deck increased the parking structure from 348 to 1,230 parking spaces, a gain of 882 spaces. It simultaneously created a mall with approximately 64,000 square feet of leasable area for bank, retail, service, restaurant, general office, and medical office rental.

See Case Study: Ferren Mall, New Brunswick, New Jersey.

Sale of Development Rights

Many cities and parking authorities own surface parking lots located within the CBD or within short walking distances of urban rail stations. These real estate parcels, although an important public parking resource, are not necessarily fulfilling their highest and best uses either as a parking resource or in terms of assisting the revitalization needs of an urban community. Centrally located real estate in a downtown business district is always valuable. The opportunity presents itself for municipalities and parking authorities to sell and transfer their development rights for a particular parcel of land and then utilize the funds received to build structured parking facilities.

There is an opportunity for municipalities and parking authorities to sell and transfer their development rights for a particular parcel of land and then utilize the funds received to build structured parking.

An example of this process is the Rahway Transportation Center Garage (RTCG). In 2003, the Rahway Parking Authority (RPA) sold the development rights to its existing surface parking Lots C & D, containing 158 parking spaces (12 shopper and 146 commuter), to a residential apartment developer. The developer paid $1,360,000 (or $10,000 per apartment unit) "up front" for the development rights. The RPA purchased adjacent unimproved rear-yard properties for approximately $450,000 to square off the development footprint and to allow for the construction of replacement public

parking spaces. As additional compensation to the RPA, and based on the RPA's approved design standards, the developer constructed a 72-space off-street public parking lot and 40 public parking spaces in the public right-of-way, for a total of 112 replacement public parking spaces, owned and operated by the RPA, at a cost of approximately $250,000.

The RPA used the $900,000 "net" developer's fee to pay development soft costs and construction interest associated with building the RTCG containing 524 parking spaces—a fraction of the cost. The municipality has benefited by surrounding the residential development project with public parking. The Rahway planning board required the developer to provide only 1.1 parking spaces per residential unit, based on analysis of the specific project and the number of tenants expected to be generated. In addition, the RPA leases 40 night-time parking spaces to the developer in the public surface parking lots, which generates additional parking revenue of approximately $24,000 per year (only $50 per space per month).

Lastly, the developer pays to the RPA a minimum ground-lease payment of $180,000 per year, which increases based on the project's rental income for 60 years, at which point the underlying fee ownership of the real estate property is transferred to the developer. This strategy is appropriate in emerging markets, where the developer has access to building parcels without incurring the total up-front costs of building the parking structure.

See Case Study: Rahway Transportation Center Garage, Rahway, New Jersey.

The City of Miami Beach also sells the development rights of surface parking lots owned by the city. However, its strategy is a little different. In exchange for a long-term ground lease of 90+ years and the development rights associated with the real estate parcel, the developer must build a parking garage with a minimum of 1-for-1 and usually 2-for-1 replacement parking spaces. The replacement parking garage must be available for public parking and cannot be reserved or exclusive to the developer's project. The developer pays to the city a one-time development impact fee and annual ground-lease payment equal to the gross income previously generated by the surface parking lot. The developer collects and keeps the revenue generated by the public parking spaces in the garage but agrees not to charge parking rates higher than those charged by Miami/Dade County public parking entities.

The City of Miami wins by increasing the public parking supply without expending any capital dollars or undertaking additional bond debt. The developer's project generates annual revenue for the City through real estate taxes and the ground-lease payments. Lastly, the City receives a one-time development impact fee that can be used for other municipal capital projects, including parking. This strategy is most appropriate in strong residential markets and municipalities with higher parking rates, where the garage can be underwritten quite easily.

The Toronto Parking Authority (TPA) routinely sells air and subterranean development rights to its surface parking lots. Presently, the TPA is negotiating the sale of the development rights of a surface parking lot with 160 spaces located in the Young/St. Clair development area, in the north end of the downtown business district. The parcel was purchased by the TPA in 1962

for $125,000 Canadian dollars (CD). The parking lot generates $1.3 million CD gross and $1 million CD net revenue for the TPA. The development rights deal negotiated by the TPA is as follows:

- Developer up-front air rights payments to TPA—$20 million.
- Developer FAR bonus payment to TPA—$2 Million to $3 million ($50 per square foot over 100,000 square feet).
- Developer builds 200-space underground turnkey parking garage for a Guaranteed Maximum Price (GMP) of $40,000 CD per parking space, total $8 million, paid by TPA upon completion.
- Upon completion of development project, developer pays TPA $10,000 per parking space—total $2 million for shared-parking use of TPA's 200-space garage—which is counted by the City as satisfying the developer's parking-space requirements for the commercial and retail components of the project.
- Developer constructs, below the TPA's underground parking facility, additional private parking spaces at a ratio of 1 parking space per 1 dwelling unit, for residential component of the development project.

Developer Incentives

The City of Long Branch employed a unique method to develop a public parking deck as part of its successful Pier Village redevelopment program. The City allowed the developer to maximize the use of on-street parking in exchange for public parking in a new four-level parking garage.

Pier Village is a mixed-use project located along the oceanfront in Long Branch. It is composed primarily of the "three R's": retail, residential, and restaurants. A parking deck was required at Pier Village for the following reasons:

- It is a fairly dense development.
- The oceanfront experiences a significant swell in parking demand during the summer months.
- The project itself generates significant parking demand, especially in the summer.
- From a marketing perspective, the residential units needed nearby set aside parking spaces.

Originally, the developer asked the City and its newly formed parking authority for assistance in developing the large parking garage. However, the City does not charge for parking and therefore had no system of parking revenue to help support a new parking garage costing well over $10,000 per space.

The large parking garage was placing considerable stress on the Pier Village pro forma. In order to minimize that stress, the City allowed portions of the local on-street parking supply to be used in calculating the overall parking supply for Pier Village, thereby reducing the overall size of the deck, and reducing overall project costs. In addition, some streets were widened to allow

angle parking, increasing the on-street parking supply even further. The expanded on-street parking supply plus a four-level parking deck were sufficient to satisfy the Pier Village parking requirement. Both the on-street expansion and parking structure were funded 100 percent by the developer.

When embarking on a new project that will involve a parking structure, it is important to know what funding options should be considered. No two geographic locations, business environments, or projects are alike. As a result, many alternate funding mechanisms have been developed and successfully employed.

When first committed to paper, the economics of a parking-garage project can appear quite ugly. But don't be discouraged: Parking garages with tough economics can get built. Several of them are showcased in this report.

The following "toolbox" is a quick reference that illustrates many of the parking garage funding options available today. The toolbox further indicates potential future tools (darkened boxes) that may be considered to encourage or even subsidize future downtown parking-garage projects.

PARKING GARAGE FUNDING TOOLBOX

BOND FINANCING	TAX FINANCING	OTHER
System Test Municipal Backing *Morristown*	Atlantic City Employee Lots	PILOP *Coconut Grove, Belmar*
System Test No Backing *Hartford*	Connecticut Model	HYBRIDS Bonds / Cash / Rents *Rahway, Ann-Banks, Ferren Mall*
Project Test Institutional / Corporate Backing *New Brunswick, Detroit, West Chester, PA*	1 cent gasoline tax	DEVELOPER INCENTIVES Include public parking in private decks in exchange for lower requirement; *Long Branch*
System or Project Test PILOT Backing *Bloomfield, Princeton*	$2 to $5 / space / year Big box / suburban	UEZ-SID
BOM / State Financing Operational & Revenue Outsourcing *Bradley Airport, CT*		RAB-RAD
		New Market Tax Credits

Darkened boxes:
Potential future tools for financing structured parking

IV. OTHER TOOLS

Existing Tools

This section describes several existing mechanisms that may be employed to finance construction of parking structures in New Jersey.

Urban Enterprise Zone (UEZ) Funding

A significant number of the densely urban cities within the state of New Jersey have applied for and been designated as Urban Enterprise Zones (UEZ). At the present time 37 cities, including Asbury Park, Camden, Elizabeth, Newark, New Brunswick, Perth Amboy, and Trenton, have been designated as UEZs.

As a UEZ, the designated city is permitted to charge consumers 50 percent of the current sales tax rate when making a purchase within the geographic boundaries of the UEZ. The 50 percent sales tax collected by the merchant and forwarded to the New Jersey Treasury Department is made available to the originating UEZ city for "community improvements." Traditionally, "community improvements" funded with UEZ sales tax monies have been streetscape improvements such as sidewalks, street furniture, street lights, curbing, and associated soft costs such as architectural and engineering consulting services.

Parking system improvements have also been paid for with UEZ funds. The Town of North Bergen UEZ has been particularly committed to using UEZ funds for parking system improvements. In 1999 North Bergen applied for and received $1 million of UEZ funds for improvements to the Bergenline Avenue and Broadway UEZ areas between 71st and 79th Streets. Approximately half of the total funding—$495,000—was approved for parking improvements, which included $265,000 for parking meter replacement (poles, meter housings, and electronic mechanism and installation) and $230,000 for construction and paving improvements to the 74th Street and Bergenline Avenue shoppers' public parking lot.

In addition to the Bergenline Avenue parking lot improvements, the Town of North Bergen also utilized UEZ funds to purchase property and construct public parking lots on 73rd and 74th Streets and Broadway. UEZ funds used for the 73rd Street & Broadway parking lot was approximately $250,000, of which $150,000 was for land acquisition and $100,000 was for construction and engineering. UEZ funds used for the 74th Street & Broadway parking lot was approximately $445,000, of which $290,000 was for land acquisition and $155,000 was for construction and engineering. Consequently, the Town of North Bergen over a five-year period spent approximately $1,544,000 of UEZ funds for parking facilities, equipment, and improvements.

It is unlikely that UEZ funds would be approved to subsidize the cost of operating or debt service for a parking facility. However, New Jersey's UEZ administrators have approved funds to buy down the cost of land acquisition, project construction, and financing. The purchase of

parking access and control equipment with UEZ funds for a parking facility would also seem to be an appropriate item for funding.

UEZ funding for enhancements to an existing parking system or facility, such as replacement of obsolete meters or parking lot repaving, enables a municipality or parking authority to increase revenues, which in turn are available on an ongoing annual basis to fund new parking facilities. The North Bergen Parking Authority's (NoBPA) parking meter revenues increased dramatically after the installation of the new electronic meters on Bergenline and Broadway. Total NoBPA parking system revenue for 1999, prior to the new parking meter installation, was $56,882. Meter revenue in the UEZ after new meter installation was $209,000 in 2000; $220,000 in 2001; and $286,000 in 2002. The NoBPA's UEZ meter revenue was in excess of $340,000 for calendar year 2005, a 500 percent increase over the six-year period.

Special Improvement Districts (SIDs)

Special Improvement Districts (SIDs) are hybrid, quasi-public/quasi-private entities. They are authorized by an Act of the New Jersey Legislature, N.J.S.A. 40:56-65 et seq., passed in 1984. In other states, notably New York and Pennsylvania, Special Improvement Districts are known as Business Improvement Districts.

Special Improvement Districts are created through a municipal ordinance establishing a geographic area as a Special Improvement District. Typically, the municipality designates a non-profit private entity as the management corporation for the SID. That management corporation establishes the policies and programs of the Special Improvement District and implements those policies and programs.

Special assessments are imposed on all properties included within the Special Improvement District. Case law requires that there must be some relationship between the assessments imposed on the respective properties and the benefits conferred on those properties. The SID's special assessment could be used to fund all or portions of structured or surface parking facilities or to credit-enhance the financing of the structured or surface parking facility.

With respect to structured parking facilities, the credit-enhancement mechanism is more likely to be feasible than as a funding mechanism, given the extensive capital costs involved and the typical SID budgets, which range from $75,000 to $500,000 (with the exception of some larger SIDs, such as in Atlantic City and Newark). For some years, the SID in Summit, New Jersey, operated the parking facilities to service its business district.

Special Improvement District financing could be available to augment the financial feasibility of a parking facility or to credit-enhance such a facility.

This study did not find any SIDs being used presently in New Jersey to finance or credit-enhance surface or parking structures, although this possibility was discussed in the context of the Westfield redevelopment project. (That project did not proceed.) However, it should be remembered that the SID financing tool could be available to augment the financial feasibility of a parking facility or to credit-enhance such a facility.

RAB and RAD

The Redevelopment Area Bond Financing Law (RAB) and the Revenue Allocation District Law (RAD) are two new tools created by the New Jersey Legislature in 2002 for redevelopment and revitalization. They are complicated and complex and are not a panacea, but they should be considered as another available tool that may assist in rendering a parking infrastructure project financially feasible.

New Jersey has recently witnessed the measurable impact that well-located and well-served transit stations with sufficient parking can have on real estate values within proximity of the station. This creates an increase in values that could support a RAD (tax-increment) financing. NJ Transit completed revisions to the "Montclair Connection" commuter rail service within the last several years by providing direct service ("one seat") to New York's Penn Station. Within several months of the service upgrade, each parking lot along the rail line was at full capacity and, in fact, several stations utilized valet parking to increase the utilization of the parking lots. More interestingly, there was a significant increase in value of the residential units within walking distance (one-half mile) of the stations. In a graduate thesis submitted by Juliette Dellecker Michaelson of Columbia University entitled *Walk and Ride: How MidTOWN DIRECT Has Affected Property Values within Walking Distance of Train Stations,* the data showed an average increase in value of approximately $130,000 per residence[9]—30 percent higher than comparable "non-walkable" properties. This increase in residential value could be the basis of a tax-increment financing (RAD) structure to be utilized for local and regional improvements to increase utilization of the stations, including the financing of parking structures.

Redevelopment Area Bond Financing Law (RAB). The Revenue Redevelopment Area Bond Financing Law N.J.S.A. 40A:12A-64 et seq. applies to all redevelopment areas under the local Redevelopment and Housing Law. The RAB permits municipalities to grant tax exemptions or abatements to developers and to pledge the payments in lieu of taxes (PILOTs) to the repayment of bonds. The RAB also authorizes special assessment as a protection against bankruptcy to insure the PILOTs. The Act provides that the municipality may issue the bonds or may apply to the New Jersey Economic Development Authority, the New Jersey Redevelopment Authority, or "other instrumentality created by the State with the power to incur debt and issue bonds and other obligations."

The PILOTS and special assessments or general obligations at the municipal level may be assigned as security for the bonds and are not included in the general funds of the municipality. The RAB presents the municipality with the option to guaranty or otherwise pledge its credit to the payment of the bonds. When the municipality does pledge its credit, the bonds are considered part of the gross debt of the municipality on any debt statement filed in accordance with local bond law. The use of the proceeds of the bonds is subject to the Local Public Contracts Law bidding; however, an exception is the design–build process. Issuance of the bonds and the related professional fees and issuance costs are an exception to the Public Contracts Law and do not have to be bid, although they may be bid at the discretion of the public entity.

[9] Juliette Dellecker Michaelson, *Walk and Ride: How MidTOWN DIRECT Has Affected Property Values within Walking Distance of Train Stations* (Columbia University, Urban Planning Graduate Thesis, May 2004).

Revenue Allocation District Financing Act (RAD). The Revenue Allocation District Financing Act allows a municipality to pledge the increase in taxes resulting from a redevelopment project to the repayment of bonds issued to finance all or portions of the project. For example, if a parking facility were required to leverage private development and substantial increases in taxes were anticipated, the increased taxes from the new development may be pledged to support the debt issued to finance construction of the parking facility. In other states, this financing structure is known as Tax Increment Financing.

The RAD statute applies to redevelopment areas as defined in the Local Redevelopment and Housing Law. It permits a municipality to create a revenue allocation district that may consist of properties in an area not to exceed 15 percent of the total taxable property assessed in the municipality (this may be increased to 20 percent by approval of the Local Finance Board) as part of a Redevelopment Plan approved by the governing body of the municipality.

New Market Tax Credits

The New Market Tax Credits (NMTC) Program was originally instituted in December 2000 as part of a federal program titled the "Community Renewal Tax Relief Act of 2000." The NMTC Program creates a tax credit for equity investments made in Community Development Entities (CDEs). The NMTC Program was designed to generate $15 billion in new equity to encourage the private sector to invest in low- to moderate-income rural and urban communities throughout the United States. The NMTC enables investors to claim tax credits equal to 39 percent of individual equity investments over a seven-year period: 5 percent in each of the first three years and 6 percent in each of the final four years.

The NMTC Program is administered by the Community Development Financial Institution Fund of the U.S. Department of Treasury, and the tax credits flow through qualified CDEs. CDEs may make direct investments in qualified economic development projects in low-income communities (as defined by census tracts), or a CDE may be a larger nonprofit intermediary that invests in community-based CDEs, which in turn make the investment in a qualified project.

The New Market Tax Credit program will have particular applicability to parking structures, since the 7-year phased-in credits will help bridge the financing gap, helping to eliminate the early operating deficits of a typical urban garage.

In New Jersey, several CDEs are active in the NMTC program. One of the most significant allocations was awarded to the New Jersey Economic Development Authority through its entity, NJCDE, which was allocated $125 million. The NJCDE will, in turn, provide below-market-rate loans and investment capital in low-income areas.

The NMTC program will have particular applicability to urban parking structures since the seven-year, phased-in tax credits will help bridge the gap illustrated in the pro forma set forth in ***Appendix V***, because the low-interest financing will help eliminate the early operating deficits of a typical urban garage. However, like RAD and RAB, NMTC will have a limited (although quite effective) application, and the complex structuring process will also act to limit its utilization.

V. RECOMMENDATIONS

In addition to the existing financing tools mentioned in the preceding section, this section highlights new ideas for financing structured parking in urban areas. While some of the suggestions may be controversial or require political or legislative initiatives to enact, we believe there is merit to implementing the innovative approaches described herein. Support of parking infrastructure goes hand-in-hand with the State's policies in favor of Smart Growth and redevelopment. It is hoped that the Legislature and the administration will continue to create and augment available tools to support parking infrastructure.

This study illustrates some tools that have been used and can be used to support parking infrastructure. For some urban areas, these may not be enough given limited shared-parking options, high land costs, or market limitations on parking fees. In this context, this study recommends some financial mechanisms that can create a pool of capital, perhaps under the control of the New Jersey Economic Development Authority, that could assist parking projects through loans, grants, or credit-enhancement mechanisms.

Expanding the Toolbox

Gasoline Tax

A one-half cent increase in the gas tax can raise approximately $30 million, which can in turn be used to finance structured parking in Smart Growth communities.

The Regional Plan Association advises that a one-half-cent increase in the motor fuels tax can raise approximately $30 million. It is the position of this study that parking is an inherent aspect of transportation infrastructure. Parking is the final destination for motor vehicle transportation. As mentioned in Donald Shoup's *The High Cost of Free Parkin*g,[10] it is believed that 30 percent of all cars on the street in the central business district are looking for a parking space. If there are parking decks readily available, congestion is reduced and consumers save gas and money. If necessary, current legislation should be amended to specifically authorize the use of gasoline taxes to support parking infrastructure. A half-cent or one-cent increase in the motor fuels tax would generate a significant long-term funding source for parking infrastructure.

At this time, the Legislature is considering a gasoline tax increase to fund the Transportation Trust Fund which, given policies over the last few decades, will soon pay only debt service, with no funding available for capital projects and programs. It is recommended that the legislative consideration of an increase in the motor fuels tax include explicit authorization of a one-half-cent or one-cent increase dedicated to parking infrastructure, together with whatever other increase is authorized by the Legislature.

CRDA Grants; Replenishment Fund Tax Credits

The New Jersey Casino Reinvestment Development Authority (CRDA) is a potential source of financing for a parking structure associated with a public–private parking project. CRDA

[10] Shoup, ibid.

is authorized to make loans at two-thirds of the market rate and take a second position behind a primary lender, thereby lowering the primary lender's exposure. Projects must qualify for a "B" bond rating. Private developers utilizing CRDA funds must have a minimum of 10 percent equity participation in the development deal.

CRDA to date has not participated in the financing for the construction of any parking structure, in or outside of Atlantic City, even though a parking facility is a "qualified project" under its guidelines. Recently CRDA did participate and provide a loan for the acquisition of land by Caesar's Casino for a 3,000-space parking deck. In addition to its repayment terms, CRDA required a covenant from Caesar's that parking in the garage be available at all times to the general public. This condition was particularly important because the new Caesar's parking garage was built adjacent to "The Walk" outlet mall. The Walk is located between Caesar's Boardwalk Casino and the Atlantic City Convention Center. Caesar's garage is a significant shared parking resource for the outlet mall, which has no dedicated parking.

CRDA does not provide any grant funding for development projects. All loans must be repaid and are issued only if the project is deemed to be economically feasible. Loans are provided for land acquisition, development cost, and construction. No loans are available for subsidizing operational and administrative expenses.[11]

Tax on Parking

When a municipality chooses to tax parking, it is often placing a tax on commuters who drive into the city to utilize its transportation resources or go to work in its office buildings and retail centers. The rationale is that persons who park within the municipality create wear and tear on the road system, consume police and public safety services, contribute to road congestion, and otherwise use the city's resources. A tax on parking usually contributes revenue to a city's general fund, which in turn provides a measure of real estate tax relief to city residents and compensates both the municipality and residents for the perceived inconvenience of commuters.

New Jersey's parking tax statute N.J.S.A. 40:48C-6 authorizes a municipality to impose up to a 15 percent tax on gross parking fees. Unlike other states, New Jersey statutorily exempts only one- and two-family dwellings from a parking tax. That is not to say that a New Jersey municipality, when adopting a taxing ordinance, cannot choose to exempt residential tenants that lease parking from their landlords. The City of Hoboken has done this; it exempts residential tenants from the parking tax if they lease the parking from their landlords.

The cities of Hoboken and Newark both have 15 percent taxes on parking. The City of Hoboken generated $600,000 in 2004 and $658,000 in 2005 from its tax on parking. The City of Newark for year 2005 is estimated to generate $15 million, of which $10 million is from Newark/Liberty Airport, and $5 million is from citywide public and private parking operations. Newark currently dedicates its 15 percent tax on parking to its general fund. The City of Miami, Florida, by special act of the state legislature, was authorized in September of 1999 to impose a 20 percent tax on parking while the city was in economic difficulty and was under state financial

[11] For further information on CRDA's funding programs, see www.njcrda.com.

oversight. Miami regained its solvency, and in October of 2004 it reduced the tax to 15 percent as a result of a taxpayer lawsuit. During Miami's fiscal year 2003–04 when the tax was 20 percent, revenue of $14,533,462 was collected. In fiscal year 2004–05, after the tax was reduced to 15 percent, revenue of $11,489,521 was collected.

Florida Statute 166.271, unlike the New Jersey statute, places some reasonable restrictions on the expenditure of the revenues collected by the City of Miami generated by taxing parking. No less than 60 percent or more than 80 percent can be used by the City to provide property tax relief. Additionally, no less than 20 percent or more than 40 percent can be used for transportation improvements including, but not limited to, "street, sidewalk, roadway, landscape, transit and streetscape beautifications improvements in the downtown or urban core areas."

Consequently, 20 percent to 40 percent of the tax on parking, which equals $2.3 million to $4.6 million annually, is programmed by Miami for infrastructure, which includes parking improvements. The City of Miami often provides the Miami Parking Authority with funds for parking facility land acquisition in areas of the city outside the CBD where additional public parking is needed. The parking authority usually pays for the cost of construction from parking authority revenues for the parking facilities in the areas outside the CBD that have been requested by the City.

If, in New Jersey, parking tax revenues were committed to building parking improvements within the municipality rather than for property-tax relief, a significant funding source would be available for structured parking in urban communities.

If N.J.S.A. 40:48C-6 were used as a "parking tax," i.e., if all or a significant amount of the tax revenue were committed to building parking improvements within the municipality rather than for property-tax relief, a significant funding source would be available for urban communities that need structured parking components to assist urban redevelopment. It is the authors' recommendation that a certain portion of the parking tax be dedicated to create a parking fund for the City of Newark.

Zoning: Amendment to RSIS and/or Municipal Land Use Law

With reference to the discussion above regarding shared parking and reduced demand for parking in urban, suburban, and transit-oriented contexts, it is urged that the Legislature and appropriate regulatory bodies, in consultation with planning, zoning, and transportation resources and available institutions, modify the existing statutory and regulatory structures and support educational processes to implement shared-parking concepts in the legislative and real world contexts.

Current census data indicates that the majority of today's parking standards are vastly overstated and too general to be applied to greenfields and urban areas alike.

Recent data compiled by the Center for Urban Policy Research at Rutgers University updates parking standards in relation to the most current census information.[12] This data is important because it has validated what many parking and planning professionals have known for some time now: The majority of today's municipal parking standards are vastly overstated or too general to be applied from one land-use area (e.g., central business district versus greenfield) to another. The next logical step is to prepare a series of parking standards that are sensitive to various definable land-use environments. In addition to breaking down parking standards by land

[12] Matt Cuddy, David Listokin, Reid Ewing, and Jesse Sherry, "Residential and Nonresidential Parking Standards for New Jersey: A Pilot Investigation," 2006.

use, it is equally important to develop parking standards by "time of day," thus recognizing and quantifying the influence of shared parking. The Institute of Transportation Engineers (ITE) has acknowledged the importance of this distinction by publishing "time of day" adjustments to parking demand factors in the latest (Third Edition) version of its widely referenced *Parking Generation* series. This study primarily concerns itself with projects that will be located in an "urban" or "suburban center" context. The ITE definition of a suburban center is

> [D]owntown areas of suburbs that have developed CBD characteristics but are not the central city of a metropolitan region. These activity centers have characteristics that may include good transit service, a mix of surface and structured parking, connected streets, a connected pedestrian network and a mix of land uses."

Indeed, many New Jersey municipalities fall into this category.

In an attempt to develop real world parking requirements for suburban center (or CBD) mixed-use redevelopment programs, the authors have developed a model ordinance that incorporates downsized parking ratios plus shared-parking adjustments (see ***Appendix X***). As indicated in the model ordinance, there is room for further adjusting a project's parking requirement through application of more project-specific data, allowing typically vacant public parking to count toward project parking supply, and allowing for PILOP (payment in lieu of parking) payments. Instituting such an ordinance will:

- Create more redevelopment opportunities through enhanced project financial feasibility.
- Create efficiencies and revenue within the existing parking inventory.
- Promote a walkable CBD that is not overrun and interrupted by parking lots.
- Recognize and embrace creative proposals involving "Zipcar®," light rail, bicycles, water taxis, shared use of private lots, and lot consolidations, among others.

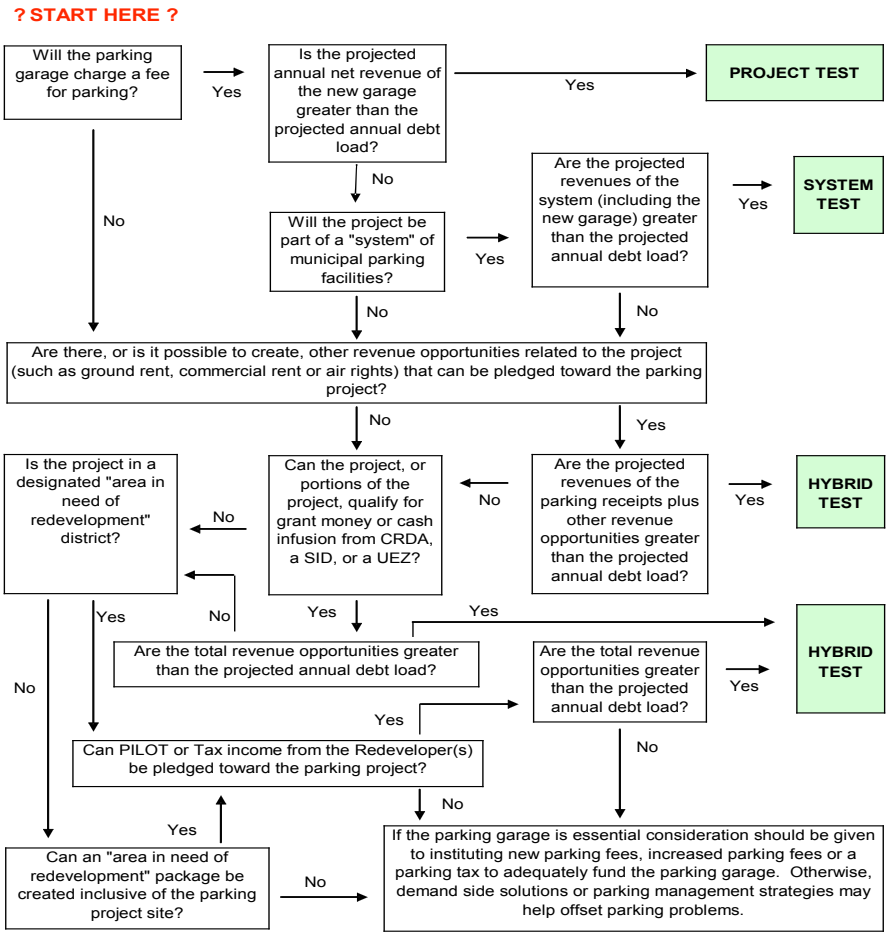
Smart Growth Assessment Planning Surcharge

The New Jersey State Development and Redevelopment Plan and other State policies encourage redevelopment in Planning Areas 1 and 2 and discourage development in Planning Areas 3, 4, and 5. Typically, parking in Planning Areas 1 and 2 is structured parking, with parking in the $20,000-per-space range. Parking in Planning Areas 3, 4, and 5 is more likely surface parking, which is more destructive of the environment, more consumptive of land resources, but substantially less expensive—in the $3,000-per-space range.

Estimates suggest that there are some five million surface parking spaces in commercial, retail, and office uses in Planning Areas 3, 4, and 5. An assessment of fifty cents per month per space on each of those five million spaces would result in a funding pool of $30 million annually, which could then be applied in a fashion similar to that discussed above with respect to the Transportation Trust Fund based on a motor fuels tax increase. This pool of funding could provide, again probably through a separate "Smart Growth Planning Division" within the New Jersey Economic Development Authority, funding for loans, grants or credit enhancement for parking infrastructure projects.

For municipalities facing a myriad of options to finance parking within their communities, the following Parking Financing Decision Tree can help sort out the various choices. The decision tree summarizes the various financing techniques described in this report and helps highlight considerations a municipality must make in selecting the best option for its particular circumstances.

PARKING GARAGE FINANCING
DECISION TREE



VI. HYPOTHETICAL PARKING PROBLEMS/SOLUTIONS

This section describes the structured-parking financing challenges a private developer experiences in constructing residential and office space in a downtown New Jersey location. When a project is phased, and/or the operator is not able to charge true market rate for parking (especially in the early years of operation), this poses a major constraint on financial feasibility. Various tools are recommended to bridge the financing gap. In a second scenario, a hypothetical parking situation is provided to demonstrate how a developer might augment parking revenue in the early years of operation of a parking garage.

Urban Redevelopment: The Challenges of Structured Parking for the Developer

Background

Urban development and redevelopment projects require a critical density in order to support historically high (and even in this uncertain economic period, still-increasing) land costs. For example, land prices in Newark range from $1,000,000 per acre to $2,000,000 per acre, depending upon location and zoning in place. Land prices are similar in New Brunswick, primarily due to the strength of the residential market. Even in cities such as Camden and Paterson, which are clearly in great economic distress, land values range from $800,000 to more than $1,000,000 per acre.

In order to support these high land costs, the development/redevelopment projects built on these parcels require significant density in order to be financially viable. By way of example, a representative land value for market-rate residential is typically measured in "land cost per unit." In an urban area such as Newark, that value might be $20,000 per unit. In order to support a land price of $1,500,000 per acre, the resultant density would need to be at least 75 units per acre ($1,500,000 divided by $20,000). This level of density, which is not uncommon in urban areas, invariably requires structured parking as a land-planning solution. The situation is even more critical for office uses, since the required parking ratio for an office use is usually double that for residential use, and the land prices for an office use are at the high end of the ranges set forth herein.

The problem is further exacerbated in an office use in an emerging urban market, as the primary competition for office requirements in emerging markets is typically an established suburban location. In the suburbs, parking is located on grade (because it is the cheapest method of constructing), and all parking is free. These features serve to further weaken the competitive stance of an "emerging market" urban solution when the range of alternatives includes a suburban office campus.

In summary, the two uses that are critically essential to successful urban redevelopment—*office*, because of job creation and tax revenue, and *residential*, because it provides stability and a "24/7" vitality and energy to a city—typically require structured parking as a solution.

The Cost/Value Gap

The cost of structured parking is typically measured in the term "cost per space." The most typical range of costs is $20,000 to $25,000 per space (including soft costs and allocated land value), but in some urban areas with difficult soil conditions (such as a waterfront site that requires the use of pile foundations), the cost can approach $30,000 per space.

The value of a parking space is entirely dependent on the strength of the specific market in which it is being built, and is obviously a function of the revenue generated per space. Without getting into the complexities of shared parking or "space turnover" multiples, a representative metric of revenue potential is monthly rate. There is a broad range within the state, ranging from approximately $100 per month in New Brunswick to $220 per month in Newark. Parking rates in newer garages in Jersey City and Hoboken are higher than the Newark rates, but these markets are somewhat anomalistic in that all their costs (rental, operating costs, and amenities) are priced closer to New York City rates than New Jersey rates. The "Gold Coast" waterfront markets are more mature office and residential markets; they typically pull their users from New York City, where drivers are used to paying for parking.

Utilizing a "midpoint" of monthly rate at $150 (which yields an annual revenue of $1,800) and an annual expense for operating expenses of $480, the resultant annual net revenue per space, thus, is $1,320. Utilizing an income capitalization rate of 10 percent, the imputed "value" of the space is approximately $13,200.

Based upon the selected average cost of $20,000 per space, there is an immediate gap between cost and value of $6,800. However, this gap is likely to be larger in certain urban areas for the following reasons:

1. ***Project Phasing***. Most urban projects utilize parking at the lowest levels of a multi-story, mixed-use building structure. The foundations for the parking need to incorporate the building loads of the "overbuild" portion to be constructed in the future. In addition, since the parking structure is typically built first, it is usually sized for the full project buildout (or something close to it, unless a "modular" parking/building solution is utilized). As a result, the initial construction costs are higher, and the revenue generation is lower, because the full project parking demand has not yet materialized.
2. ***Rate Maturity/Growth***. Some urban parking structures do not charge a true "market" rate for parking, as it is often being subsidized by some entity. Therefore, there is a "ramping up" of rates that must occur before rate stability can occur. This makes the early years of operation particularly difficult as usage patterns are established.

By way of example, NJ Transit has established a "target" overage monthly rate of $105 for parking near rail stations. In some locations, monthly rates are closer to $60, and the rate increase would need to be staggered over a period of time.

Helping to Close the Gap—Almost

Legislation introduced in 2002—Revenue Allocation District (RAD) and Revenue Allocation Bond (RAB) financing—helps close the cost/value gap, but not completely.

A typical structure would utilize a Payment in Lieu of Taxes (PILOT) to cover the debt service on bonds issued in an RAB financing program. The conceptual examples summarized below indicate that even the RAD/RAB approach likely will not close the gap:

1. ***Residential***. With required parking of one space per residential unit, the parking subsidy is approximately $6,800 per unit. A negotiated PILOT amount could range from $1,500 to $1,750 per year for each residential unit. Assuming that 50 percent of the PILOT can be utilized for debt service on a RAB issue, and further assuming a 15-year PILOT program, the allocated PILOT amount would support a RAB issue in the range of $6,500 to $7,000 per space—almost enough to close the gap. However, if the issues described in the previous paragraphs—Project Phasing and Rate Maturity/Growth—are taken into account, the financing gap widens.

2. ***Office***. With required parking of two (2) spaces per 1,000 square feet of floor area, the parking subsidy is approximately $13,600, or $13.60/square foot. A negotiated PILOT for an office use could range from $2.50 to $3.00/square foot. Again assuming that 50 percent of the PILOT could be utilized for debt service on a RAB, and assuming a 15-year PILOT, the allocated PILOT amount would support a RAB issue in the range of $10.50 to $11.00/square foot—almost enough to close the gap. However, the issues of Project Phasing and Rate Maturity/Growth are even more likely to occur with an office use, and the financing gap widens considerably.

Diminishing Use of PILOT

Parking garage economics are most challenging in the early years, when patronage is ramping up.

One method of financing downtown parking garages that are developed in conjunction with downtown redevelopment programs is to use new tax or PILOT revenues from the redevelopment to augment parking revenue in the early years. This process is under way in downtown Bloomfield, New Jersey, and is under consideration for a major redevelopment in downtown Belmar, New Jersey.

Most new parking garages experience a gradual increase in patronage over the first three to four years. As a result, many garage projects are financially unfeasible in the early years because they don't achieve their mature revenue potential until several years after opening day. When reliable revenue sources, such as taxes or PILOTs, are pledged to

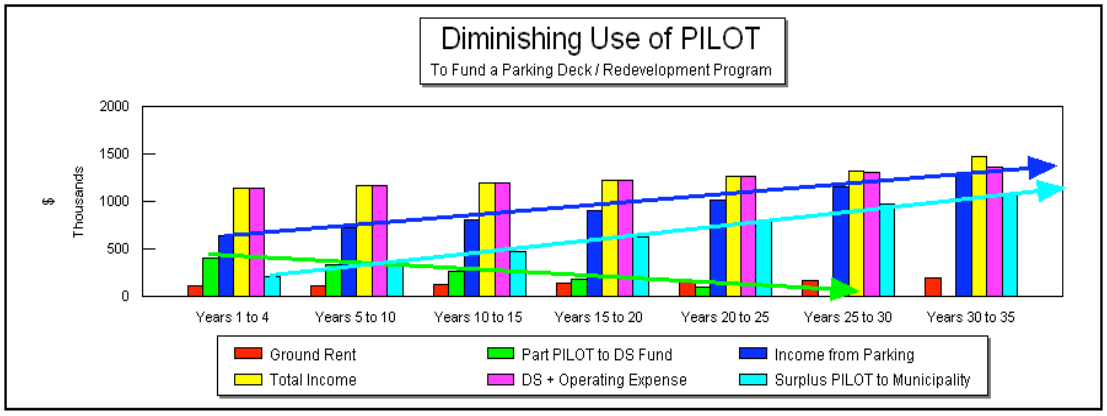
pay parking garage debt service in the early years, the garage may become financially feasible. The authors have developed a sample model for a downtown redevelopment plan that includes a separately financed 500-space parking deck. The building program is:

- 150 residential units over 35,000 square feet of grade-level retail
- A four-level, 500-space parking garage

The overall footprint of the site is 270' x 300' and can fit in a standard 300-foot square downtown block.

Appendix Y includes an annual expense model for the 500-space garage. As indicated, the total annual debt service and operating expense is estimated to be just over $1.1 million per year. Assuming a garage parking rate averaging 80 cents/hour and a monthly permit rate of about $80, this garage would not be self-liquidating until about its 25th year of operation. Clearly, supplemental revenue sources need to be developed. In this model, the sources are (1) ground rent for the retail at $3.00 per square foot (100 percent dedicated to pay parking-deck debt service), and (2) PILOT for residential at $4,000 per unit (partially dedicated to pay debt service, as needed). The remaining portions of the PILOT not required, for debt service would flow to the municipality.

Appendix Y also summarizes the model project assumptions and estimates. As shown, the project economics are feasible, but slim, during the early years. However, by year 10, almost $500,000 in annual PILOT is flowing to the municipality while only $260,000 in PILOT is dedicated to garage debt service. The following graph illustrates how PILOT used for the parking deck diminishes as parking and ground rent revenues increase:



This program is very indicative of new-breed redevelopment projects that are being constructed throughout the state. The replacement of worn-down and tired downtown buildings with projects that include domiciles and well-lit, attractive parking facilities are breathing new life into New Jersey CBDs.

VII. APPENDICES

Appendix V: Model Pro Forma: Financing a Structured Parking Component of a Mixed-Use Development (540-Car Garage)

Appendix W: Comparison of Parking Authority, Parking Utility, and Parking Department or Bureau

Appendix X: Model Parking Code

Appendix Y: Sample Model to Fund a 500-Car Parking Deck and Accompanying Redevelopment Package;
Annual Expense Model—Tax Exempt—Revenue Bond Financing,
Main Street Parking Deck Program, Downtown Location, New Jersey

Appendix Z: Sources

Case Study Appendix: *Case Study Matrix and Case Study Summaries*

Appendix V: Model Proforma: Financing a Structured Parking Component of a Mixed-use Development

Mixed-Use Urban Redevelopment Project	540 Space Parking Structure
ULI Parking Structures Study	To Support 100 Residential Units and 200,000 SF of Office
Summary Parking Analysis	
July 2006	**(Return OF and ON equity , 10 years)**

data = *assumption for this proforma; can be revised to suit specific market conditions*

Assumptions:

Number of Spaces in Deck	**540**	2 elevated decks plus spaces at grade
Approximate Hard Construction Cost	$10,800,000	**$20,000** per space
Soft Costs and Related Expenses	$2,160,000	**20%**
Allocated Land Value	**$1,000,000**	
Total Developed Cost of Parking Structure	$13,960,000	$25,852 per space
Financing Model:		
Equity	$2,792,000	**20%**
Return on Equity	**12%**	
Equity Return Period (years)	**10**	
Debt (Taxable Bonds)	$11,168,000	**80%**
Term of Bonds (years)	**30**	
Interest Rate on Bonds	**8.00%**	
Operating Expense / Space/ Year	**$500.00**	(assumes property taxes paid by "overbuild" components)
Parking Tax (as a % of Gross Revenues)	**0%**	
Residential Rate/ Month	**$140.00**	
Residential "Oversell" Multiplier	**100%**	
Office Rate/Month	**$200.00**	
Office "Oversell" Multiplier	**120%**	
Initial Daily Rate - Surplus Spaces	**$15.00**	
Transient "Oversell" Multiplier	**120%**	
Annual Parking Rate Increase	**4.0%**	
Annual Expense Escalation	**3.0%**	
Surplus Space Usage Rate (#days/year)	**250**	

NOTE: assumes a one year construction period, prior to this proforma

Parking Revenue	**Year**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
Residential Revenue:																					
# Residential Units Built		50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Spaces Utilized by Residential		50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Residential Permits Sold		50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Residential Monthly Rate		$140	$146	$151	$157	$164	$170	$177	$184	$192	$199	$207	$216	$224	$233	$242	$252	$262	$273	$284	$295
Residential Revenue		$84,000	$174,720	$181,709	$188,977	$196,536	$204,398	$212,574	$221,077	$229,920	$239,116	$248,681	$258,628	$268,973	$279,732	$290,922	$302,559	$314,661	$327,247	$340,337	$353,951
Office Revenue:																					
SF of Office Space Occupied		100,000	150,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
Spaces Utilized by Office		200	300	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
Office Permits Sold		240	360	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480
Office Monthly Rate		$200	$208	$216	$225	$234	$243	$253	$263	$274	$285	$296	$308	$320	$333	$346	$360	$375	$390	$405	$421
Office Revenue		$576,000	$898,560	$1,246,003	$1,295,843	$1,347,677	$1,401,584	$1,457,648	$1,515,953	$1,576,592	$1,639,655	$1,705,241	$1,773,451	$1,844,389	$1,918,165	$1,994,891	$2,074,687	$2,157,674	$2,243,981	$2,333,741	$2,427,090
Surplus (Transient) Spaces Revenue:																					
# Surplus Spaces		290	140	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Factored Utilization		50%	50%	70%	70%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Factored # of Spaces		145	70	28	28	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Transient Permits Sold		174	84	34	34	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
Rate per Day		$15	$16	$16	$17	$18	$18	$19	$20	$21	$21	$22	$23	$24	$25	$26	$27	$28	$29	$30	$32
Surplus Space Revenue		$652,500	$327,600	$136,282	$141,733	$210,575	$218,998	$227,757	$236,868	$246,342	$256,196	$266,444	$277,102	$288,186	$299,713	$311,702	$324,170	$337,137	$350,622	$364,647	$379,233
Total Parking Revenue		$1,312,500	$1,400,880	$1,563,994	$1,626,553	$1,754,788	$1,824,979	$1,897,979	$1,973,898	$2,052,854	$2,134,968	$2,220,366	$2,309,181	$2,401,548	$2,497,610	$2,597,515	$2,701,415	$2,809,472	$2,921,851	$3,038,725	$3,160,274
Parking Expenses																					
Return on Equity		$441,196	$441,196	$441,196	$441,196	$441,196	$441,196	$441,196	$441,196	$441,196	$441,196	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Debt Service on Bonds		$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541	$918,541
Operating Expenses		$270,000	$278,100	$286,443	$295,036	$303,887	$313,004	$322,394	$332,066	$342,028	$352,289	$362,857	$373,743	$384,955	$396,504	$408,399	$420,651	$433,271	$446,269	$459,657	$473,447
Parking Tax		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Parking Expenses		$1,629,738	$1,637,838	$1,646,181	$1,654,774	$1,663,625	$1,672,742	$1,682,132	$1,691,804	$1,701,766	$1,712,026	$1,281,399	$1,292,285	$1,303,497	$1,315,046	$1,326,941	$1,339,193	$1,351,812	$1,364,810	$1,378,198	$1,391,988
Net Operating Income (Loss)		**($317,238)**	**($236,958)**	**($82,187)**	**($28,221)**	**$91,163**	**$152,238**	**$215,847**	**$282,094**	**$351,088**	**$422,941**	**$938,968**	**$1,016,896**	**$1,098,051**	**$1,182,565**	**$1,270,574**	**$1,362,223**	**$1,457,660**	**$1,557,040**	**$1,660,526**	**$1,768,286**
NPV of Cash Flow		**$3,718,594**																			
Discount Rate	8.8%																				

APPENDIX W

COMPARISON OF PARKING AUTHORITY, PARKING UTILITY AND PARKING DEPARTMENT OR BUREAU

Parking Authority

The Legislature of the State of New Jersey in 1948 adopted N.J.S.A. 40:11A et seq., commonly known as the "Parking Authority Law," which authorized municipal governments to create an independent parking authority. A parking authority has the same geographic boundaries as the city that created it but is "a public body corporate and politic and a political subdivision of the State (of New Jersey)." A New Jersey parking authority has five commissioners who are appointed by the governing body of the municipality (city council or city commissioners) for staggered five-year terms, or seven commissioners with two mayoral appointments and five governing body appointments. A parking authority may employ an executive director, attorney, engineer, accountant, and any other professionals and staff necessary to manage and deliver parking services to the city's residents and the general public.

As noted elsewhere in this report, New Jersey parking authorities have extraordinary statutory authority. N.J.S.A. 40:11A-6 grants parking authorities the powers necessary to carry out and effectuate essential government purposes. Furthermore, parking authorities may buy, sell and/or lease property as a lessee or lessor; construct multiuse projects and parking facilities; borrow money; issue bonds; mortgage or otherwise encumber its assets; enter into contracts; and retain earnings.

Because parking authorities fund their operations from revenue derived from parking user fees rather than through real estate taxation, and board members traditionally are appointed from the business community, parking authorities tend to be operated like a business. Parking authorities are conscious of the fact that annual expenses should not exceed parking revenue. Surplus annual revenue is retained to pay for renewal and replacement repairs at existing parking facilities and to purchase real estate or build new facilities.

The strength of a parking authority is its independence. The parking authority's commissioners are appointed, not elected, public officials. Consequently, a parking authority board of commissioners can make difficult planning decisions such as raising parking rates, installing parking meters, increasing parking enforcement, acquiring property by eminent domain, or selecting a location to construct a parking facility without regard to its immediate political consequence. A parking authority provides elected officials with a measure of political cover in that the authority's decisions are the result of the actions of the authority's board rather than the city's governing council/commission.

Among the other advantages of a parking authority:

- Its debt is outside the municipalities bonding limit (Cap)
- Its sole purpose and function is to construct, maintain, and operate public parking
- It can retain earnings and accumulate surplus revenue for capital projects
- It can develop income-producing mixed-use projects exempt from real estate taxes, which are intended to subsidize the cost of providing public parking.

(*See New Brunswick Parking Authority, Ferren Mall Case Study*.)

The negatives of a parking authority are the reverse side of its strengths. Parking authorities are independent and, on occasion, choose to raise parking fees or pursue goals, objectives, or projects that are not supported by a majority of the municipal governing body. Parking authorities are not directly controlled by the local governing body, which has the power only to appoint or reappoint one authority commissioner per year to the authority's member board. Parking authorities traditionally have generated revenue surpluses at year end or have accumulated significant financial reserves through retained earnings that local municipal governments prefer be utilized for taxpayer relief or be transferred to the municipality's general fund to offset the city's operating budget expenses.

Based upon a review of *Who's Who in Parking 2005*, published by the International Parking Institute (IPI), there are seven states—Alabama, Connecticut, Delaware, Florida, New Jersey, Ohio, and Pennsylvania—that have parking authorities. However, it should be noted that Miami is the only parking authority in the state of Florida that was created by a special act of the legislature. The state of New Jersey has approximately thirty parking authorities, more than any other state in the nation.

Parking Utility

A municipality, as an alternative to a parking authority, may create a parking utility. A parking utility has a number of the strengths of a parking authority: executive director; operating budget and debt service separate from the municipality; ability to generate annual surplus revenue and retain earnings; ability to set its own rates and fees; and a function strictly limited to providing public parking.

Among the negatives associated with a parking utility: limited independence; the executive director usually reports through the city administrator/manager or CFO; the local governing body retains jurisdiction over rates, fees, capital projects, operating budget, and personnel; and parking revenues in excess of annual operating expenses generally are turned over to the city's general fund.

The good news/bad news aspects of a parking utility are that the municipal governing body maintains virtual control of the parking entity. However, the hands-on control exercised by the municipal governing body places parking planning and decision making within the political process.

In municipal environments where control of the mayor's office and governing body are continually contested, parking can become a political rather than a planning issue, which may affect a parking utility's ability to aggressively pursue public parking improvements and objectives.

There are at least four parking utilities within the state of New Jersey: East Brunswick, Hoboken, Princeton, and Trenton.

Parking Department/Bureau

Parking departments and bureaus are the least-independent government entity for managing and operating municipal parking resources. A parking department/bureau can stand alone and be on par with other municipal departments: public works, clerk's office, tax collector, for example. Alternatively, it can be a subsidiary of a large department such as public works, police, administration, or finance.

The advantage of a parking department/bureau is the direct control over operations exercised by the mayor as the chief executive of the municipality. All parking fees and revenues, absent a bond agreement to the contrary, are deposited into the city's general fund and are available for any and all municipal expenses.

The disadvantage of a parking department/bureau is that the parking entity competes with all other municipal departments for budget approval and operating funds. The parking department may not retain annual excess parking revenue in a capital account. Any indebtedness incurred by the municipality to fund parking improvement is counted toward the city's debt cap ceiling. Increases of parking fees and rates must be approved by resolution or ordinance of the municipal governing body.

There are some well-managed municipal parking departments within the state of New Jersey, of which Red Bank and Summit are notable examples. Because the state of Florida has statutorily allowed only the city of Miami to create a parking authority, other of its cities— Clearwater, Ft. Lauderdale, Hollywood, Miami Beach, Orlando, St. Petersburg, and West Palm Beach— operate as parking departments.

APPENDIX X: MODEL PARKING CODE

Parking Requirements—Mixed-Use Projects in a CBD or SUBURBAN CENTER

Procedure

1. *Determine minimum parking requirement / Individual uses*—The minimum number of parking spaces that are to be provided and maintained for each use shall be determined based on following parking factors:

Residential	**1.4 per unit**
Office	**2.9 per 1,000 SF**
Retail / Commercial	**2.7 per 1,000 SF**
Hotel	**1.3 per room**
Restaurant	**0.3 per seat**
Movie Theater	**0.3 per seat**
Conference / Convention	**5.0 per 1,000 SF**
Place of Worship	**0.2 per seat**
Other	**Per APA Parking Standards**

2. *Adjust for shared parking*—The minimum parking requirement for each use shall be multiplied by an "occupancy rate" as determined by a study of local conditions (or as found in the following "Occupancy Rate" table), for each use for the weekday night, daytime and evening periods, and weekend night, daytime and evening periods, respectively.

Occupancy Rate Table[13]

	M-F 8A-6P	M-F 6P-12A	M-F 12A-8A	Sat / Sun 8A-6P	Sat / Sun 6P-12A	Sat / Sun 12A-8A
Residential	60%	100%	100%	80%	100%	100%
Office	100%	20%	5%	5%	5%	5%
Retail / Commercial	90%	80%	5%	100%	70%	5%
Hotel	70%	100%	100%	70%	100%	100%
Restaurant	70%	100%	10%	70%	100%	20%
Movie Theater	40%	80%	10%	80%	100%	10%
Conference / Conven.	100%	100%	5%	100%	100%	5%
Place of Worship	10%	5%	5%	100%	50%	5%
Other (note 3)						

Note 1 *This table indicates the percent adjustment of the minimum parking requirement during each time period for shared parking.*

Note 2 *Percentages set forth in the Occupancy Rate table are set to include a small "safety margin" of parking beyond that minimally needed to serve an average peak demand. Therefore a local study of parking demand may yield a greater reduction in parking required.*

Note 3 *"Other" occupancy rates as demonstrated by applicant via parking study or other credible evidence.*

[13] Source: Victoria Transport Policy Institute

3. *Tabulate minimum parking requirement for each time period*—Sum up the adjusted minimum parking requirements of each land use for each of the six time periods to determine an overall project minimum parking requirement for each time period.

4. *Determine minimum parking requirement/Project*—The highest of the six time period totals shall be the minimum parking requirement for the mixed-use project.

5. One hundred percent (100%) of the parking supply shall be provided within 400 feet of an entrance to the proposed building(s) it will serve unless waived via terms of item (6) and / or (7), below.

6. Other parking spaces in the vicinity of the project may be used to satisfy portions of the minimum parking requirement if the applicant can secure such parking through lease or other similar terms, or if it can be demonstrated through study that certain public parking areas are typically vacant during the peak demand period of the project or will become vacant as a result of removals or demolition, all subject to the approval of the municipality.

7. If the parking requirement, or portions of the parking requirement, cannot be met, developers may purchase relief at the 2006 rate of $15,000 per parking space. This fee will be deposited into the Municipal Parking Improvement Fund to be used exclusively for the development, improvement or maintenance of public shared parking in the redevelopment district.

APPENDIX Y

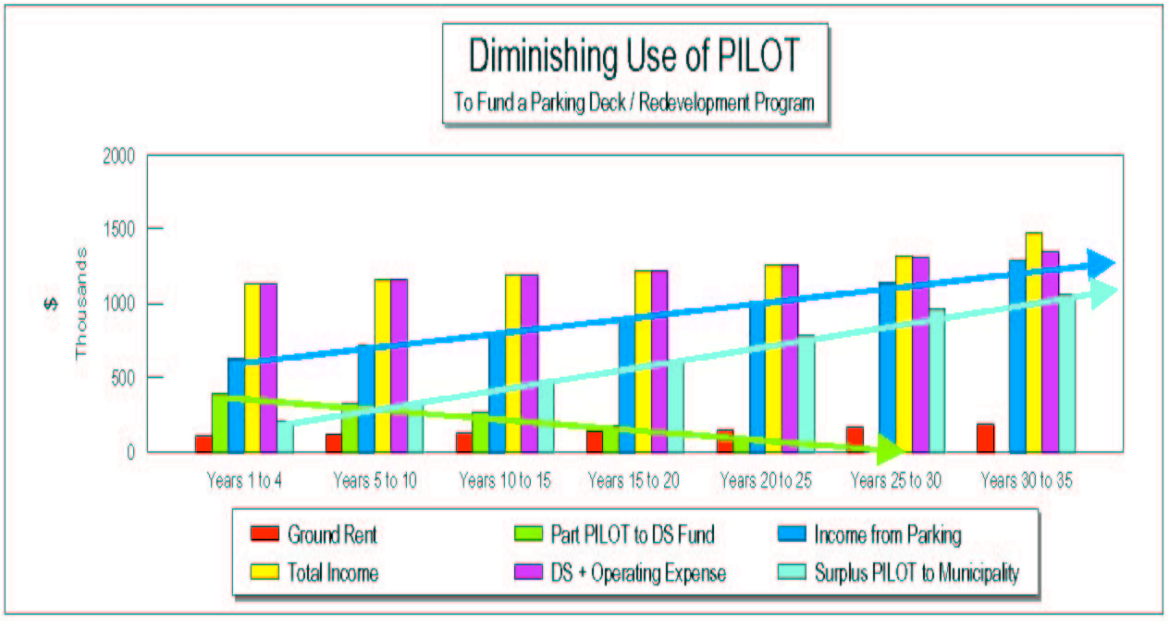
SAMPLE MODEL TO FUND A 500-CAR PARKING DECK AND ACCOMPANYING REDEVELOPMENT PACKAGE

Assumptions:

78,000 SF land purchase / donation / or both: 34,500 for deck; 43,500 for redevelopment site
Parking deck = 500 spaces
Redevelopment = 35,000 SF ground level retail with 150 residential units above
Tax exempt financing; 30 years; 5.5%
Ground rent (w/ escalator) for retail @ $3.00 per SF; 100% dedicated to DS Fund
PILOT (w/ escalator) for residential @ $4,000 per unit; Partially dedicated to DS Fund

Municipal Involvement:

The program would benefit significantly from municpal involvement in the form of land donations and / or parking facility management.



	Years 1 to 4	Years 5 to 10	Years 10 to 15	Years 15 to 20	Years 20 to 25	Years 25 to 30	Years 30 to 35
Ground Rent	$105,000	$115,500	$127,050	$139,755	$153,731	$169,104	$186,014
Part PILOT to DS Fund	$395,000	$331,125	$260,278	$181,114	$91,122	$0	$0
Income from Parking	$635,000	$714,375	$803,672	$904,131	$1,017,147	$1,144,291	$1,287,327
Total Income	$1,135,000	$1,161,000	$1,191,000	$1,225,000	$1,262,000	$1,313,394	$1,473,341
DS + Operating Expense	$1,135,000	$1,161,000	$1,191,000	$1,225,000	$1,262,000	$1,305,000	$1,353,000
Surplus PILOT to Municipality	$205,000	$328,875	$465,722	$617,486	$787,338	$966,306	$1,062,937

Appendix Y, continued

ANNUAL EXPENSE MODEL
TAX EXEMPT—REVENUE BOND
MAIN STREET PARKING DECK PROGRAM—DOWNTOWN LOCATION, NJ

500 Space Plan	
Hard Construction – Garage	
500 Spaces @ $15,000 per space (note 1)	$7,500,000
Pedestrian Connections – Other Garage Amenities/Allowance	
Lump Sum	$500,000
Hard Construction – Total	$8,000,000
Construction Contingency @ +/- 4% of hard total	$320,000
Design, Supervision, Survey, Testing and Project Management @ +/- 8% of hard total	$640,000
Base Capital Cost	$8,960,000
Land 78,300 s.f. @ $30 per sq ft (note 2)	$2,349,000
Total Development Cost	**$11,309,000**
Financing	
Deposit to (net funded) Construction Fund	$8,758,400
Deposit to Land Fund	$2,349,000
Deposit to D.S. Reserve Fund	$921,920
Deposit to (net funded) Cap interest Fund (12 months)	$898,872
Issuing Costs (note 3)	$469,000
Correction Amount	$2,808
Total Financing	$13,400,000
Par Amount of Bonds	**$13,400,000**
Annual Debt Service Payment	
30 year issue @ 5.5%, level payment schedule	$921,920
Garage Operating Expense	
500 spaces @$425 per space per year	$212,500
ANNUAL DEBT SERVICE & OPERATING EXPENSE ESTIMATE	**$1,134,420**
Annual amortization per space – not including oversell	$2,269
Monthly amortization per space – using 1.2 oversell	$158

Note 1	Based on Means Cost Data (2004) average public parking garage cost estimate for New Brunswick, NJ + 10%
Note 2	34,800 SF for parking deck site: 43,500 for Retail/Residential site
Note 3	Includes Underwriters Discount, Bond Insurance Premium, Bond Counsel, Printing, Advertising & Miscellaneous, General Counsel, Parking Consultant

APPENDIX Z: SOURCES

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APPENDIX: CASE STUDY MATRIX AND SUMMARIES

CASE STUDIES

This section provides case study descriptions of existing tools for financing structured parking. The case studies include narratives and where available, financial information as to the structure of the financing for each garage facility.

The following is a control list of all the case studies. This list is to be used as a guide to the summary matrix and to the narratives that follow:

1. ***In–State New Jersey Mixed-Use Projects***:

    1.1 ***Ferren Mall and Parking Deck***—New Brunswick, NJ
    1.2 ***Plum Street Garage***—New Brunswick, NJ
    1.3 ***Spring Street Garage***—Borough of Princeton, NJ
    1.4 ***The Mall Lot***—Morristown, NJ
    1.5 ***Vail Mansion***—Morristown, NJ
    1.6 ***The Epstein's Project/Maple Avenue Parking Garage***—Morristown, NJ
    1.7 ***Westfield Redevelopment Project***—Westfield, NJ

2. ***In–State New Jersey Stand-Alone Projects***:

    2.1 ***Paterson Street Garage Expansion***—New Brunswick, NJ
    2.2 ***John L. Dalton Parking Garage***—Morristown, NJ
    2.3 ***Rahway Transportation Center Garage***—Rahway, NJ

3. ***Out-of-State Projects***:

    3.1 ***Morgan Street Parking Garage***—Hartford, CT
    3.2 ***Oak Avenue Garage***—Coconut Grove, FL
    3.3 ***General Motors Garage***—Detroit, MI
    3.4 ***West Chester University Garages***—West Chester, PA
    3.5 ***Bradley Airport Garage***—Hartford, CT
    3.6 ***Louis Armstrong Airport Garage***—New Orleans, LA
    3.7 ***Metro Station Garage***—Grosvenor, MD

CASE STUDY SUMMARY MATRIX
URBAN AND SUBURBAN CENTER PARKING GARAGE FINANCING STUDY

In-State: Mixed Use

	1.1 Ferren Mall and Parking Deck	1.2 Plum Street Garage	1.3 Spring Street Garage	1.4 The Mall Lot	1.5 Vail Mansion	1.6 Epstein's Project/ Maple Avenue Garage	1.7 Redevelopment Project
Location	New Brunswick, NJ	New Brunswick, NJ	Princeton, NJ	Morristown, NJ	Morristown, NJ	Morristown, NJ	Westfield, NJ
Year on-line	1985	2007	2004	1997	2007	2007	n/a
Location / Context	Urban	Urban	Suburban Center	Suburban Center	Suburban Center	Suburban Center	Suburban Center
Number of Spaces	882	855	500	270	100	800	1,200
Stand Alone / Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use	Mixed Use
Mixed Use Elements	63.8K SF Retail	16K SF Gr. Lvl. Retail 102 Residential Units 60K SF Med Offices	12.3K SF Gr. Lvl. Retail 77 Residential Units Park / Plaza	131 Residential Units 11K SF Office Space	50 Residential Units	75K SF Gr. Lvl. Retail 312 Residential Units 25K SF Office Bldg. "Guide Dog" Staging	n/a
Garage Site	Demolition/ Redevelopment Area	Demolition / Redevelopment Area	Existing lot/ redevelopment area	Existing Lot	Historic site/ redevelopment area	Existing Deck + Adjacent Land	n/a
Agency Overseeing Project	New Brunswick Parking Authority	New Brunswick Parking Authority	Borough of Princeton	Morristown Parking Authority	Morristown Parking Authority	Morristown Parking Authority	n/a
Land Cost	$3,000,000	$1,760,000	$0	$0	$0	Swap	n/a
Garage & Related Construction	$10,612,500	$15,719,984	$9,625,000	n/a	n/a	$15,000,000	n/a
Soft (Developmental) Costs	$1,167,375	$1,593,176	$1,730,000	n/a	na/	$1,304,348	n/a
Total Development Cost	$14,779,875	$19,073,160	$11,355,000	$400,000	$1,500,000	$16,304,348	n/a
Hard Construction Cost / Space	$6,000	$18,386	$19,250	n/a	n/a	$18,750	n/a
Total Developmental Cost / Space	$16,757	$22,308	$22,710	$1,450	$15,000	$20,380	n/a
Bond Issue	G.O Bonds	P.A. Revenue Bonds	G.O Bonds	n/a	n/a	P.A. Revenue Bonds	n/a
Bond Issue Size	$15,000,000	$22,990,000	$13,700,000	n/a	n/a	pending approval $20,000,000	n/a
Guaranteed By	City of New Brunswick	City of New Brunswick	Borough of Princeton	n/a	n/a	Town of Morristown	n/a
Insurance	Yes	Yes	Yes	n/a	n/a	Yes	n/a
Dedicated Revenue Sources	Ground Leases	System Test 18 month Cap-I	Project Pkg Income Ground Leases Developer Pledges	n/a	n/a	System Test 18 month Cap-I Commercial Rent Developer Pledges	n/a
Credit Enhancement	None	None	None	n/a	n/a	Town of Morristown	n/a

CASE STUDY SUMMARY MATRIX—URBAN AND SUBURBAN CENTER PARKING GARAGE FINANCING STUDY

In-State: Stand-Alone

	2.1 Paterson Street Garage - Expansion	**2.2 John L. Dalton Garage**	**2.3 Transportation Center Garage**
Location Year on-line	New Brunswick, NJ 2001	Morristown, NJ 1999	Rahway, NJ 2005
Location / Context	Urban	Suburban Center	Suburban Center
Number of Spaces	440	700	524
Stand-Alone / Mixed Use	Stand Alone	Stand-Alone	Stand-Alone
Mixed-Use Elements Garage Site	n/a Acquire & Demolish Adjacent Properties	n/a Existing Lot + Adjacent Land	n/a Existing Surface Lot
Agency Overseeing Project	New Brunswick Parking Authority	Morristown Parking Authority	Rahway Parking Authority
Land Cost	$900,000	Swap	Existing
Garage & Related Construction	$4,430,000	$7,465,137	$7,809,168
Soft (Developmental) Costs	$560,000	$561,892	$761,393
Total Development Cost	$5,890,000	$8,027,029	$8,570,562
Hard Construction Cost / Space	$10,068	$10,664	$13,710
Total Developmental Cost / Space	$13,386	$11,467	$16,356
Bond Issue	P.A. Revenue Bonds	P.A. Revenue Bonds	P.A. Revenue Bonds
Bond Issue Size	$7,105,000	$9,265,000	$5,800,000
Guaranteed By	City of New Brunswick	Town of Morristown	City of Rahway
Insurance	Yes	FSA	T/B/D
Dedicated Revenue Sources	System Test 18 month Cap-I	System Test 12 month Cap-I Developer 1 Pledge Developer 2 Guarantee	Advance NJT lease Sale of development rights PILOP
Credit Enhancement	None	None	T/B/D

CASE STUDY SUMMARY MATRIX
URBAN AND SUBURBAN CENTER PARKING GARAGE FINANCING STUDY
Out-of-State: Mixed Use and Stand-Alone

	3.1 Morgan Street Garage	3.2 Oak Avenue Garage	3.3 General Motors Garage	3.4 West Chester University Garages	3.5 Bradley Airport Garage	3.6 Louis Armstrong Airport Garage	3.7 Metro Station Garage
Location	Hartford, CT	Coconut Grove, FL	Detroit, MI	West Chester, PA	Windsor Lochs, CT	New Orleans, LA	Grosvenor, MD
Year on-line	2001	2000	—	—	2001	2003	2005
Location / Context	Urban	—	Urban	—	Airport / On-Site	Airport/ On-Site	Urban
Number of Spaces	2,290	416	1,200	913	3,453	4,500	1,500
Stand-Alone / Mixed Use	Mixed Use	Mixed Use	Mixed Use	(1) Stand-Alone, (1) Mixed Use	Stand-Alone	Stand-Alone	Stand-Alone
Mixed-Use Elements	18K SF Ground-Level Retail	16K SF Ground-Level Retail	18K SF Ground-Level Retail	Performing Arts Center	n/a	n/a	n/a
Garage Site	3 Parking Facilities Demolished	—	Existing	Existing	Replaced Existing Parking Lot	Existing	Existing surface lot
Agency Overseeing Project	City of Hartford / Hartford P.A.	City of Miami Parking Authority	Detroit/Wayne County Port Authority	West Chester Borough Parking Authority	State of CT - D.O.T.	Kenner Parish	Washington Metropolitan Area Transit Authority
Land Cost	n/a	$2,500,000	$0	$0	n/a	$0	$0
Garage & Related Construction	$25,605,192	$5,032,000	—	$9,518,000	$36,900,000	—	$25,000,000
Soft (Developmental) Costs	$2,532,382	$817,700	—	$379,905	$3,318,000	—	$5,000,000
Total Development Cost	$28,137,574	$5,849,700	$41,000,000	$9,897,905	$40,218,000	—	$30,000,000
Hard Construction Cost / Space	$11,181	$8,000	?	$10,425	$10,686	—	$16,667
Total Developmental Cost / Space	$12,287	$21,994	$34,167	$10,841	$11,647	—	$20,000
Bond Issue	P.A. Revenue Bonds	P.A. Revenue Bonds	P.A. Revenue Bonds	G.O Bonds	State of CT - Special Obligation Parking Revenue Bonds	G. O. Bonds	G. O. Bonds
Bond Issue Size	$32,115,000	$6,900,000	$43,000,000	$9,670,000	$54,830,000	$46,200,000	$20,000,000
Guaranteed By	None	—	—	West Chester Borough	APCOA (DBOM Entity)	New South Dev. , LLC	Montgomery County
Insurance	None	—	—	—	ACA	—	—
Dedicated Revenue Sources	System Test 12-month Cap-I Commercial Rent Surplus Carryover	—	Ground Lease	Project Pkg. Income?	All Other Airport Lots 42-month Cap-I	Ground Lease Project Pkg. Income	user fees State DOT grant $9M
Credit Enhancement	Sinker Bonds	—	—	—	Rate Covenant	—	

CASE STUDY 1.1
FERREN MALL AND PARKING DECK
NEW BRUNSWICK, NEW JERSEY

Owner:	**New Brunswick Parking Auth.**	**Financing:**	**General Obligation Bonds**
Year on-line:	**1985**	**Total Cost:**	**$14,779,875**
Capacity:	**882 spaces**	**Guaranteed:**	**Yes, City of New Brunswick**
Mixed Use:	**63.8 K SF Retail & Office**	**Context:**	**Urban**

Project Description:

The Ferren Mall is situated at the intersection of Albany Street (Rt. 27) and Easton Avenue, directly opposite the NJ Transit New Brunswick Train Station. The mall and parking garage are centrally located and service commuters, Robert Wood Johnson University Hospital staff and visitors, Rutgers University students and faculty, Middlesex County Courthouse attorneys, staff and litigants, as well as the residents of the city.

Project Financing:

The total Ferren Mall & Deck project cost, including land acquisition, demolition, environmental, cost of issuance, development A & E soft costs, mall and deck construction, and streetscape improvements, was financed in 1983 using one-year renewable project notes in the amount of $15 million. The project was permanently financed in 1985 as part of a larger $19 million bond issue.

Commercial rental income in 1985, the first full year of mall leasing operations, was $617,492. In 1992 rental income generated by the 63,805 s.f. net leaseable space in the Ferren Mall was $920,129, or $14.42 per square foot. In 2005 rental income generated by 57,735 s.f. of net leaseable space was $1.2 million, which equals $20.78 per square foot. Year 2006 mall rental increases are tied to the N.Y. Metro CPI Index, with a minimum of 2 percent and maximum of 4 percent.

CASE STUDY 1.2
PLUM STREET GARAGE
NEW BRUNSWICK, NEW JERSEY

Owner:	**New Brunswick Parking Auth.**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**2007**	**Total Cost:**	**$19,073,160**
Capacity:	**855 spaces**	**Guaranteed:**	**Yes, City of New Brunswick**
Mixed Use:	**16K SF Ground-Level Retail, 102 Residential units, 60K SF Medical Offices**	**Context:**	**Urban**

Project Description:

The Project, a parking deck consisting of approximately 855 parking spaces, is being constructed on Plum Street in the City of New Brunswick and includes the acquisition of certain parcels of land upon which the parking deck will be located. The Project is located in a redevelopment area designated by the City, and is part of a comprehensive plan for the redevelopment of the City's downtown business district. On May 2, 2006, the Authority approved and executed a Development Services Agreement with French Street Urban Renewal Corporation an affiliated company of AST Corporation, the Developer designated by the Housing Authority of the City of New Brunswick to effectuate the City's redevelopment plan, of which the Project is a part.

The Authority contracted with the Developer to construct the Project and to perform other professional services in connection therewith. The Authority will pay the Developer the sum of $18,205,189 for construction of the Garage. The Project will be primarily used by the general public, inhabitants of Developer's residential units expected to be constructed in the vicinity of the Project, and visitors to various health care facilities, including Robert Wood Johnson University Hospital, The Children's Specialized Center, The Child Health Institute, and the yet-to-be-constructed Medical Arts Building.

The construction of the Project commenced on or about June 1, 2006 and is expected to be completed on or before March 31, 2007. In the event the Project is not completed by such date, the Developer will pay liquidated damages to the Authority for each day of delay.

In connection with the Project, the Developer and the Authority have entered into a Land Swap Agreement pursuant to which the Developer will exchange certain parcels of the land owned by the Developer with the Authority to accomplish the Authority's Project and the Developer's Projects within the redevelopment area.

CASE STUDY 1.3
SPRING STREET GARAGE
PRINCETON, NEW JERSEY

Owner:	**Borough of Princeton**	**Financing:**	**General Obligation Bonds**
Year on-line:	**2004**	**Total Cost:**	**$11,355,000**
Capacity:	**500 spaces**	**Guaranteed:**	**Yes, Borough of Princeton**
Mixed Use:	**12.3K SF Ground-Level Retail, 77 Residential units, Park/Plaza**	**Context:**	**Suburban Center**

Project Description:

The Borough of Princeton and Princeton Township are neighboring municipalities in New Jersey. The Township of Princeton is essentially the doughnut surrounding the core, which is the Borough of Princeton. Among other services, they share a public library. The two communities and the library determined that a substantial expansion and reconstruction of the library was necessary and desirable. The existing library was located in the heart of the Borough on Witherspoon Street. The two communities debated whether the library should be moved to the Township, which would facilitate access and parking but move it out of a pedestrian-friendly context. The two municipalities approached and analyzed the options in a deliberative fashion and concluded that maintaining the library in its existing location was the better choice. It would remain pedestrian-friendly. The Borough's contribution was to provide enhanced parking on what had been an adjacent surface parking lot.

The Borough, under the leadership of its then mayor, Marvin Reed, and a cooperative and supportive Council, proceeded to undertake a redevelopment project. Relying upon a shared-parking concept, the Borough undertook the obligation to construct an approximately 500-space public parking facility financed through Municipal General Obligation Bonds. Portions of the surface parking lot were ground-leased to the designated redeveloper for construction of 77 rental apartments, including low- and moderate-affordable housing units, approximately 14,000 SF of retail space and a public park adjacent to the library where previously there was an unattractive surface parking facility. The public park is approximately 15,000 square feet and created a tremendous amenity to the Borough and the community at large by establishing an anchor at the intersection of Hulfish and Witherspoon Streets and an open space available to the public as well as the library patrons.

CASE STUDY 1.3 (continued)

Project Financing:

Part of the Borough's commitment was to provide free parking to library patrons. The Borough of Princeton had operated its parking resources within the municipal budget, and excess revenues supported the general treasury of the Borough. The Borough governing body made a determination to create a utility and to continue providing parking revenues at existing levels as a contribution to the general funds of the Borough. Future revenues augmented by the increased new parking structure were pledged to support debt service on the new 500-space parking garage. In addition, a ground lease and payment in lieu of taxes were committed to offset any shortfalls in order to support debt service on the parking garage so that there would be no burden to Borough taxpayers.[14] Through the Local Redevelopment and Housing Law, the Borough was able to charge the redeveloper not only with the obligation to build the commercial elements of rental and retail, but also in order to ensure an integrated project, the responsibility to design and build the public parking garage.

[14] Excess revenues from the PILOT and ground lease would go to the municipal treasury, since it was the Borough that was issuing its debt and bearing that risk.

CASE STUDY 1.4
THE MALL LOT
MORRISTOWN, NEW JERSEY

Owner:	**Morristown Parking Authority**	**Financing:**	**n/a**
Year on-line:	**1997**	**Total Cost:**	**$400,000**
Capacity:	**270 spaces**	**Guaranteed:**	**n/a**
Mixed Use:	**111K SF Office space**	**Context:**	**Suburban Center**
	131 Residential units		

TOWN OF MORRISTOWN/MORRISTOWN PARKING AUTHORITY OVERVIEW

The Morristown Parking Authority *was created by an Ordinance of the Town of Morristown in March 1956. It has managed and operated off-street and on-street meters since its inception. In the last ten years, it has completed a number of major projects to support downtown redevelopment and revitalization, Chancery Square apartments, reconstruction of the "Mall Lot" and construction of the Dalton parking garage. It is currently involved in implementation of two additional parking projects, the Vail Mansion and Epstein projects, that will significantly contribute to the Town's economic vitality, as well as its revitalization and redevelopment efforts.*

Project Description:

In August 1997, the Morristown Parking Authority ground-leased to the Applied Companies a footprint to support the construction of Chancery Square, which consists of 131 market rate residential apartment units and approximately 11,000 square feet of first-class office space. As part of the project, the previously existing 307-space surface parking facility was reconfigured and, through efficiencies, 270 parking spaces were retained. As a result of this development, a significant new ratable was created for the Town of Morristown on previously tax-exempt Parking Authority property.

The Parking Authority does not dedicate or reserve spaces for the occupants of the residential units at Chancery Square, but assures the availability of 175 parking spaces to its residents. Because of shared parking efficiencies the Parking Authority makes available an additional 250 permits to commercial and business users for daytime use, thus selling approximately 425 permits in a 270-space lot, an oversell of more than 57 percent.

The Parking Authority has carefully monitored this situation for seven years. During the Parking Authority's peak hours of operations, which is 12:00 noon to 1:00 P.M., there are routinely 10 to 20 parking spaces available to ensure that permit holders can find parking. On weekends, when more residents are home, office demands significantly diminish, and there is substantial excess capacity to meet the residential requirements of Chancery Square. The "Mall Lot" is operated in its entirety as a monthly parking facility; thus, operating costs are reduced because no attendants are required.

Project Financing:

Because of the efficiencies of the mixed-use, shared-parking program, this facility generates significant net revenues to the Parking Authority. These revenues are committed to the system and help support structured parking facilities within the municipality.

Morristown Chancery Square/Mall Lot	
Gross Revenues	$252,000
Ground Lease Payments to MPA	+ 155,000
Contractual Obligation to Redeveloper	- 54,000
Operating Expenses	- 64,800
Net Revenues	$288,200

CASE STUDY 1.5
VAIL MANSION
MORRISTOWN, NEW JERSEY

Owner:	**Morristown Parking Authority**	**Financing:**	**n/a**
Year on-line:	**2007**	**Total Cost:**	**$1,500,000**
Capacity:	**100 spaces**	**Guaranteed:**	**n/a**
Mixed Use:	**50 Residential units**	**Context:**	**Suburban Center**

Project Description:

The Vail Mansion was a magnificent Italian renaissance mansion built by Alfred Vail, the founder of AT&T, as a summer residence in Morristown. He died before it was completed. Ultimately, the Town of Morristown acquired the mansion and used it as its municipal building for decades. The property was designated as an area in need of redevelopment, and a redevelopment concept was created for the construction of some 50 condominium units and a restaurant on the property. The Morristown Parking Authority was asked by the Morristown Redevelopment Agency to participate in the project. The Parking Authority negotiated an agreement whereby the Parking Authority would pay $1.5 million for a structured level of dedicated public parking. In addition, the large horseshoe-shaped drive in front of the Vail Mansion is being made available to the Morristown Parking Authority to operate as 30 transient parking spaces to serve needs of businesses along that portion of South Street—the main street in town.

The Parking Authority will be operating the structured parking as well as the horseshoe facility. Given the location of the Vail Mansion (adjacent to the Community Theatre, a major entertainment venue in northwest New Jersey), the Parking Authority anticipates that on event evenings, the facility will generate substantial revenues and provide convenient parking for many of the Community Theatre's patrons. Construction of this project has just commenced.

CASE STUDY 1.6
THE EPSTEIN'S PROJECT/MAPLE AVENUE GARAGE
MORRISTOWN, NEW JERSEY

Owner:	**Morristown Parking Authority**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**2007**	**Total Cost:**	**$16,304,348**
Capacity:	**800 spaces**	**Guaranteed:**	**Yes, Town of Morristown**
Mixed Use:	**75K Ground-Level Retail, 312 Residential units, 25K SF Office**	**Context:**	**Suburban Center**

Project Description:

Epstein's on The Green in Morristown was one of the last remaining downtown department stores. The store had been in Morristown for more than 90 years and was located in a prominent position facing The Morristown Green. The Morristown Parking Authority in 1956 built its first structured facility, a parking deck with approximately 215 parking spaces behind the Epstein's Department Store. That structure is now approaching 50 years and has become inadequate and functionally obsolete.

The Parking Authority began discussions with the owners of Epstein's in 2002 to integrate new parking facilities with the long-term plans of Epstein's Department Store. Within that context, Epstein's determined to close in June 2004 with plans for substantial redevelopment of its significant properties on the block adjacent to The Green.

Through cooperative efforts among the redevelopment entity, Rosewood; a combination of the interests of the Epstein's owners, Roseland Properties and Woodmont Properties; and, the Parking Authority, the governing body of the Town of Morristown, the Mayor and administration, and the Planning Board, the bulk of the block bounded by West Park Place, Market Street, Maple Avenue and DeHart Street and some adjacent parcels have been designated a rehabilitation area pursuant to the Local Redevelopment and Housing Law. Plans are currently being finalized for the project. The Morristown Parking Authority will be building a LEED-certified office building of approximately 28,000 square feet to mask the garage in the context of sensitive historic residential neighborhood and an approximately 800-space parking garage.

The Morristown Parking Authority is undertaking a first-class redevelopment project pursuant to the rehabilitation provisions of the Local Redevelopment and Housing Law. It is a quintessential Smart Growth project located adjacent to the Green in Morristown. Elements of the project will be LEED-certified including the Morristown Parking Authority office building and the adjacent public parking garage of approximately 800 spaces. The MPA project will include training facilities located within the garage and the office building, dedicated for the use of the Seeing Eye Dog Program. In addition, the Dodge Foundation will be a tenant in the office building.

Furthermore, Harry Simon, a local property owner, will be developing a mixed-use retail/residential building that will also be LEED certified. Roseland/Woodmont and the Epstein's family have formed a partnership and will be developing approximately 250 residential units and some 75,000 square feet of first-class retail space. Elements of that will be energy-efficient if not LEED-certified.

The various commercial and residential project elements will utilize the new parking facility, an existing and proximate MPA facility known as the Ann/Bank parking garage. The private commercial developers will construct approximately 130 dedicated parking spaces below one of the residential/retail buildings to service some 75 high-end residential condominium units.

CASE STUDY 1.7
REDEVELOPMENT PROJECT
WESTFIELD, NEW JERSEY

Owner:	**n/a**	**Financing:**	**n/a**
Year on-line:	**n/a**	**Total Cost:**	**n/a**
Capacity:	**1,200 spaces**	**Guaranteed:**	**n/a**
Mixed Use:	**Ground-Level Retail** **Residential units**	**Context:**	**Suburban Center**

The Town of Westfield in Union County began a process that much paralleled that of Princeton Borough. A blue ribbon committee was established to analyze long-term parking needs of the community. Parking consultants were also used at various points, and recommendations were made to create two mixed-use parking/retail/residential projects on two municipally owned parking lots.

One project, on the south side of Westfield, was to address Westfield's residential commuter parking demand by construction of a parking structure shielded by a mixed-use structure wrapping around the parking structure. The mixed-use structure would provide for retail at grade, and depending upon neighborhood response and public discussions, three or four residential floors above the retail.

On the north side of town, surface-parking facilities would be replaced by a parking structure, again, screened from two neighborhoods by retail, townhomes or condominiums on one side, and retail and residential on the other side.

A redevelopment area was designated. A redeveloper was selected at the time of a change in membership on the Town Council, and in the face of outspoken opposition, the Governing Body determined to present the project as a non-binding referendum. It should be noted that the Local Redevelopment and Housing Law specifically prohibits referenda. Case law would suggest that to be a legislative determination recognizing that it is a legislative judgment not easily subject to initiative and referendum. Thus, for example, is the issue whether there should be a parking project? whether the parking project can be funded by a General Obligation Bond? whether it can be self-liquidating: whether it should be a mixed-use project? This is the type of complex issue that is best left to decision making by an informed governing body rather than an up-or-down vote by referendum. Nevertheless, the result of that referendum was resoundingly negative, and the project was not pursued.

It is worth noting that within the matrix of financing schemes, the Town of Westfield has historically operated its parking system as part of the municipal operation. Net revenues from the parking system go into the municipal budget.

Princeton determined to recapture its existing revenue with all future increases dedicated to the new parking utility. Westfield struggled with that issue and chose not to "bite the bullet" and determined that not only should existing revenues be maintained as a contribution to the municipal budget, but that there should be annual increases in payments to the Town's general fund from any new revenue sources from the parking system.

CASE STUDY 2.1
PATERSON STREET GARAGE EXPANSION
NEW BRUNSWICK, NEW JERSEY

Owner:	**New Brunswick Parking Authority**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**2001**	**Total Cost:**	**$5,890,000**
Capacity:	**440 spaces**	**Guaranteed:**	**Yes, City of New Brunswick**
Mixed Use:	**None**	**Context:**	**Urban**

Project Description:

This project is a 440-space horizontal expansion of an existing parking deck. The horizontal expansion allowed the existing deck to remain almost completely in service during construction. The deck is located adjacent to Robert Wood Johnson University Hospital in downtown New Brunswick and serves many hospital and hospital-related uses.

For More Information Contact:

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ggiosa@wileyengineering.com

CASE STUDY 2.2
JOHN L. DALTON GARAGE
MORRISTOWN, NEW JERSEY

Owner:	**Morristown Parking Authority**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**1999**	**Total Cost:**	**$8,027,029**
Capacity:	**700 spaces**	**Guaranteed:**	**Yes, Town of Morristown**
Mixed Use:	**None**	**Context:**	**Suburban Center**

Project Description:

On June 1, 1993, Macy's Department Store, which leased an approximately 135,000-square-foot building on The Green in downtown Morristown, permanently closed as part of its pending bankruptcy proceeding. The building remained closed through May 2002 when Century 21 Department Store occupied the entire structure. The nearly nine-year closure had a significant negative impact on Morristown's morale and commercial activity.

Notably, in the context of the Chancery Square project, the Parking Authority was originally considering construction of a parking garage behind Chancery Square to support the North Park Place redevelopment, which included the former Macy's structure. The Parking Authority was approached by a representative of the partnership owning the Macy's building, as well as a number of significant structures adjacent to the Macy's building on North Park Place. A suggestion was made that the Parking Authority consider locating this substantial parking structure immediately to the rear of the Macy's building. The Parking Authority owned a surface parking lot in that location. The lot was limited in size and would accommodate only a two-bay parking facility.

Notwithstanding some difficult interactions with earlier representatives of the same property owner, the Parking Authority determined to keep an open mind in the best interest of community and proceeded to discuss options with the property owner's new representative. Those discussions became fruitful and ultimately led to the transfer of an L-shaped parcel of land to permit the construction of an efficient three-bay structured parking facility containing 700 parking spaces. The elevation of the garage was fixed to accommodate the unique topography adjacent to the former Macy's building. The Macy's building entrance at The Green opens on the first floor. The parking garage was fixed at an elevation to

CASE STUDY 2.2 (continued)

permit a direct connection at grade between the first level of the parking garage and the second floor of the former Macy's building, as well as a bridge connecting the first elevated level of the parking garage with the third floor of the former Macy's building. The 700-space parking garage was a critical factor in attracting the Century 21 Department Store as a single tenant of the formerly vacant Macy's building. The garage opened in June 1999.

Project Financing:

A complex agreement was established between the owner of the North Park Place property and the Morristown Parking Authority. The agreement between the Parking Authority and the North Park Place property owners provided for an expanded parking garage with revenues assured by the North Park Place property owners and secured by a first mortgage on the ground upon which the Macy's building is located. The agreement provided for two assurances of revenues: one, based solely on shortfalls in revenues to offset debt service operations and maintenance and the other assurance based upon tenancies in the former Macy's building. Payments were made pursuant to these assurances in 1999 through 2001.

With the occupancy of the former Macy's building by Century 21 Department Store effective May 2002 and with the attribution of certain revenue streams to the Dalton Parking Garage by 2002, no assurance payments were required.

During the negotiations with the North Park Place property owners, an owner of property on Washington Street and Cattano Avenue located on the same town block began negotiations with the Parking Authority to provide parking for a new residential project containing 149 market rate apartments and approximately 14,000 square feet of retail. Here, again, the shared parking program dramatically reduced the capital cost to the developer for construction of the residential and retail building and provided substantial augmented revenues to the Parking Authority by providing residential parking that has limited impact on space demands during the Parking Authority's peak demand hours of 11:00 A.M. to 2:00 P.M. during weekdays. Again, the Parking Authority is able to sell ice in the winter at reasonable charges.

The Dalton Parking Garage also permitted the construction of a new three-story office building on The Green at the prominent corner of North Park Place and Washington Street.

The income stream during 2002 and since has exceeded the debt service, operations and maintenance costs of the Dalton Parking Garage and has netted revenues to the parking system. The following table depicts the revenue contributions in 2002:

First Morris Bank Office Building	$10,800
Morristown Plaza payment	
❑ 149 apartments	
❑ 14,000 sq. ft. of retail	$140,040
Applied Ground Lease	$155,000
Monthly and Daily Parkers	$488,822
Total Revenue	**$794,662**

Note: With the increased patronage of the Century 21 Department Store, revenues have grown since 2002.

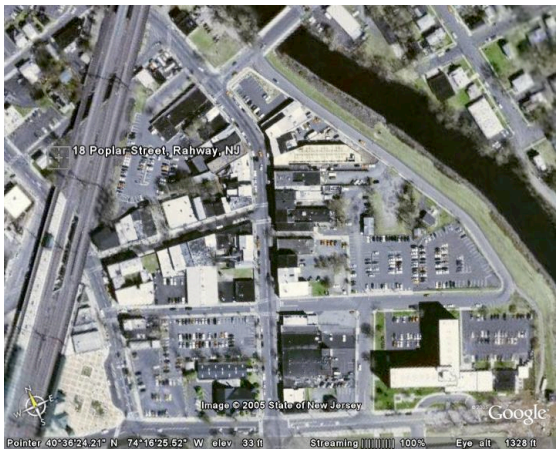
CASE STUDY 2.2 (continued)

This table depicts redevelopment leveraged by the Parking Authority's Dalton Parking Garage.

	Public Investment	Private Investment
Dalton Parking Garage	$9,000,000	
Chancery Square Apartments		$15,000,000
❑ 131 Apartments		
❑ 11,000 square feet office		
Morristown Plaza		$25,000,000
❑ 150 Apartments		
❑ 14,000 square feet retail		
"Macy's"/Century 21 Dept. Store		$15,000,000
10 Park Place facades		$ 500,000
10 Park Place expansion		$ 1,500,000
First Morris Bank		$ 3,750,000
Total Public Investment	**$9,000,000**	
Total Private Investment		**$60,750,000**

CASE STUDY 2.3
TRANSPORTATION CENTER GARAGE
RAHWAY, NEW JERSEY

Owner:	**Rahway Parking Authority**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**1999**	**Total Cost:**	**$8,570,562**
Capacity:	**524 spaces**	**Guaranteed:**	**Yes, City of Rahway**
Mixed Use:	**None**	**Context:**	**Suburban Center**



Project Description:

The Rahway Parking Authority (RPA) is an active and supportive player in the redevelopment and revitalization efforts of the City of Rahway's Central Business District (CBD). The RPA since 1995, on its own initiative, has purchased or leased strategically located downtown properties, developed them as public parking facilities, and, recognizing that surface parking lots are not the highest and best use of the CBD's real estate, the RPA has contributed its real estate holdings to public/private mixed-use and residential redevelopment projects.

Since 2003, the RPA has contributed the following public parking lots to the City of Rahway's CBD redevelopment process.

• Lots C & D	River Place	136 Apartment Units
• Lot E	Landmark Park Square	159 Apartments Units 6,390 s.f. Retail
• Lot AD	Union County Arts Center	Theatre Stage Expansion
• Lot J	Dornoch Main St. Ph. 1	36 Apartment Units 7,000 s.f. Retail
• Lot K	Carriage City Hotel	209 Condo Units 102 Hotel Rooms 13,567 s.f. Retail 4,070 s.f. Restaurant

The RPA has innovatively and aggressively pursued a strategy to replace and expand the CBD's public parking supply by building structured parking facilities and surface parking lots that are integrated into redevelopment projects. Accordingly, at the present time, although parking lots AD, C/D, E, J, and K (totaling 331 public spaces) were or are committed to development purposes, the RPA through construction of the Rahway Transportation Center Garage (RTCG 524 spaces) on RPA parking Lot A and public/private development of the River Place on- and off-street public parking areas (112 spaces) has, in fact, increased the city's CBD parking inventory by 259 public parking spaces.

CASE STUDY 2.3 (continued)

Project Financing:

In order for the RPA to be able to afford the construction of the RTCG, it was necessary for the RPA to negotiate a $3 million advance parking lease payment from NJ Transit and guarantee that 300 parking spaces would be available daily for commuter monthly and transient parkers for a minimum of 30 years. In addition, the RPA contributed $1,000,000 from the $1,360,000 the RPA received from River Place LLC for the sale of development rights to parking Lots C and D, to pay for rather than capitalize RTCG development soft costs and construction interest, and thereby reduce the amount of the bonds issued by the RPA to $5.8 million to finance the project.

Parking fees generated by commuter monthly and daily parkers, as well as area shoppers who utilize the RTCG, are not sufficient to cover the parking facility's operating expenses, renewal and replacement reserves, and debt service. The City of Rahway, by agreeing to the statutory tax-exempt status of the River Place residential development on Lots C and D, retains the parcel of land under the apartment complex; it remains the property of the RPA for 60 years and is ground-leased to the developer. This further subsidizes the RTCG by directing the ground-lease payments received by the RPA from River Place LLC to the aforesaid annual expenses of the RTCG.

The RPA, recognizing the redevelopment needs of Rahway's CBD, has adopted and instituted a policy whereby the RPA supports the reduction of parking required in association with a redevelopment plan in CBD to 1 parking space per residential dwelling unit and 2.5 parking spaces per 1,000 gross leaseable area (GLA) for office and retail space in the downtown.

However, in those instances where a development project is unable to meet the reduced parking requirements of 1-for-1 residential and/or 2.5 per 1,000 GLA for office or retail space, no waiver should be granted by the City of Rahway planning or zoning boards unless a Payment In-Lieu of Parking has been made to the RPA. Otherwise, the developer is burdening the municipal parking system and not contributing its fair share.

The purpose of the PILOP is to allow a developer to maximize a project's development potential without unreasonably burdening the available public parking supply. PILOP funds are paid by the developer to the RPA and deposited into a dedicated fund for parking studies, purchase of real estate and other costs associated with the construction and operation of parking facilities. The RPA in turn certifies that it has sufficient parking spaces in RPA facilities to accommodate the parking demand generated by the development project.

By putting the PILOP program in place, the RPA has created the opportunity for the planning and zoning boards to uniformly grant development parking waivers, require the developers to pay a fair share of the parking infrastructure costs generated by their projects' inability to meet already-reduced parking requirements, and create a dedicated fund to pay for parking improvements without burdening the municipal taxpayer.

The RPA has established the PILOP contribution to be $2,500 for each parking space that a development project is unable to construct to satisfy the 1-for-1 residential parking requirement. Currently in negotiations for a PILOP contribution is the Carriage City Hotel and Condo Tower, which requires 209 residential parking spaces from the RPA to satisfy its planning board approval. Since the

CASE STUDY 2.3 (continued)

developer of this project was in direct negotiations with the Rahway Redevelopment Agency for a significant amount of time prior to the establishment of the RPA's PILOP Program and a redevelopment agreement had already been reached in principle by the RRA and developer, it has been agreed that the RRA will pay to the RPA the sum of $522,500, from the Carriage City developer's fee paid to the RRA, which represents $2,500 per parking space for 209 residential parking spaces. In return for the RRA's agreement to make the PILOP contribution, the RPA will enter into a parking-space lease agreement with the Carriage City developer that guarantees the availability of 209 parking spaces for lease by the residential condominium owners or residents of the Carriage City Tower, at the completion of construction and through the sales phase of the condominium units. Payment of the $2,500 PILOP contribution by the RRA will be concurrent with the sale of each residential condominium unit and collected at closing.

RAHWAY TRANSPORTATION CENTER GARAGE
ACTUAL CONSTRUCTION EXPENSES, 524 PARKING SPACES, City of Rahway Parking Authority, New Jersey

Construction Costs	**Year 2004 Dollars**
Hard Construction – Garage	
524 spaces @ $13,710 per space	$7,184,040.00
Revenue Control System & CCTV 524 spaces @ $422.00 per space	$221,128.00
Hard Construction - RPA Admin.Office	
2,020 sq. ft @ $200.00 per sq. ft	$404,000.00
Hard Construction – Total	**$7,809,168.00**
Construction Contingency @ +1 - 1.75% of Hard Total	$136,660.44
Design, Supervision, Survey, Testing, and Project Management @ +1–8.00% of Hard Total	$624,733.44
Base Construction Costs	**$8,570,561.88**
Demo & Environmental	$0.00
Total Development Cost	**$8,570,561.88**
Financing	
Cost of Issuance 0.02775	$194,314.10
Gross Bond Insurance Premium 0.0094	$42,075.46
Title Insurance 0.00253	$15,000.00
Deposit to R&R Fund	$150,000.00
Deposit to D/S Reserve Fund: 1 Year Prin. & Interest Bond Payment	$366,100.00
Deposit to (self-funded) Construction Interest Fund (12 months)	$230,281.00
Deposit to (net-funded) Construction Fund	$8,570,561.88
Deposit to Site Environmental Fund	$0.00
Unadjusted Development and Financing Costs	**$9,568,332.44**
NJ Transit Advance Lease Payment: $3,000,000	**3,000,000**
Rahway Parking Authority Capital Contribution	**760,032**
Earned Interest on D/S Reserve Fund & Const. Funds	**8,300**
Rounding Amount	$0.00
Par Amount of Bonds	**$5,800,000.00**
Annual Debt Service Payment	**$363,067.55**
30 year issue @ 4.75%, blended payment schedule	
Parking Facility Operating Expense	
524 spaces @ $400.00 /garage space/ year	$209,600.00
0 spaces @ $0.00 /surface lot space/ year	$0.00
TOTAL ANNUAL DEBT SERVICE & OPERATING EXPENSE ESTIMATE	**$572,667.55**

CASE STUDY 3.1
MORGAN STREET PARKING GARAGE
HARTFORD, CONNECTICUT

Owner:	**Hartford City/Hartford Park. Auth.**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**2001**	**Total Cost:**	**$28,137,574**
Capacity:	**2,290 spaces**	**Guaranteed:**	**no**
Mixed Use:	**18K SF Ground-Level Retail**	**Context:**	**Urban**

Project Description:

Hartford's downtown has gone through many redevelopment efforts in the last couple of years. As a result of new construction and new uses brought in, parking demand increased in the downtown area. The site for the Morgan garage was already occupied by an old garage, which was freestanding, but in an unsafe condition. There were a couple of other garages in the downtown area that were old and in need of improvement.

The City of Hartford issued bonds for the parking authority to undertake these projects. The parking authority utilized bond money in an integrated way to restore 2 garages and to build a new one on the Morgan Street site. Apart from the parking need and promotion of downtown redevelopment, the other motive for a new deck was a desire to facilitate compact mixed-use development utilizing New Urbanism principles. The City believed the garage would help bring more commercial and residential areas into a growing and revitalized downtown.

This parking deck is part of a new 7-story building with offices and retail on the ground floor and parking on all the upper floors. Out of a total 2,300 parking spaces, 800 are for community college students, 1,000 are used by United Health Group, and 500 are for daily commercial parking for downtown businesses. The ground floor has total 15,000 square feet of mixed-use areas, which include 3,000 square feet of parking authority offices, 8,000 square feet of a stamp company, and 4,000 square feet of a coffee house. Design-and-build method was used for the construction of this project.

Project Financing:

The construction cost of the garage was $17 million, which is covered by general obligation bonds issued by the city in early 2005. The bonds yielded a good rate for 20 years. The Parking Authority is covering the debt service with revenues from leased space and user fees. After the debt is fully paid, future revenues from this garage will be used by the Hartford Parking Authority solely for other parking facilities.

Other revenue bonds from 2000 were used for restoration of other two garages in downtown (Mattes Garage and Church street garage), and the revenue from these garages is also being used to maintain the new Morgan Street garage.

CASE STUDY 3.1 (continued)

The bonds issued in 2000 to build the garage were in use until the beginning of 2005, but there were shortcomings for getting the money flow because 1) the bonds were restrictive in use, and 2) the bond rating was not good. The bonds were downgraded by Wall Street. Six million dollars ($6 million) was unable to be drawn down because the City forced the Parking Authority to put the money into a bond issue, and the Parking Authority could not use part of that money; the director of the Parking Authority said the bonds had a restrictive covenant. Because of the dysfunction of the Parking Authority's board, the Parking Authority had to refinance the new garage. With new bonds issued in 2005, the Parking Authority has been able to use all that money and the new bonds yielded a much better rate.

The other problem currently under attention is that ground-floor space for commercial/retail uses is not occupied yet. The Authority is still waiting to get these areas to be leased, and that might occur after some redevelopment areas are improved and built in the downtown area.

Contact: Jim Cogency, Hartford Parking Authority 860-527-7275, (Interviewed 9/9/05)

CASE STUDY 3.2
OAK AVENUE GARAGE
COCONUT GROVE, FLORIDA

Owner:	**City of Miami Parking Authority**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:	**1999**	**Total Cost:**	**$5,849,700**
Capacity:	**416 spaces**	**Guaranteed:**	**no**

Project Description:

Background:

The Coconut Grove neighborhood of the City of Miami has a rich history and past. Coconut Grove is a bay-front community noted for its relaxed atmosphere. It has lush landscaping and beautiful green parks on the water. Coconut Grove was known as an artist colony and today still maintains much of the same casual feeling. It was the location of the original Miami Pan Am Flying Boat Air Terminal, which today is in use as the Miami City Hall. Coconut Grove also is home to municipal/public and private marinas, as well as a convention center.

The Grove or Village, as it is often referred to, has undergone a significant renaissance, which includes new residential development, restaurants, shops, a performing arts theater, and a multiplex movie theatre. This growth and redevelopment generated a need for parking infrastructure to accommodate the new parking demand.

In 1993 the City of Miami adopted a zoning ordinance that would allow developers' variances on the number of parking spaces required for a particular use. The "Pay-in-Lieu" Parking Ordinance (Parking Trust Fund) was established with great success. The Pay–In-Lieu ordinance allowed for the funds paid by developers for parking waivers to be used for land acquisition and construction of new parking facilities.

The Oak Avenue Garage:

The Oak Avenue Parking Garage was designed and built with 416 parking spaces and 16,000 square feet of ground-floor retail. The Oak Avenue Garage was built as a perimeter interceptor garage at the NW edge of the retail section of the Grove. The garage was built in close proximity to 2 large shopping malls to provide additional Village parking as well as to divert traffic flow to ease congestion in the Village core. The Miami Parking Authority assembled the land and built the parking garage, which opened in the fall of 2000.

The Finances:

The total cost of the garage and retail project was $9,356,700, of which $6,900,000 was financed by a general obligation bond issued by the Parking Authority. The total 16,000 square feet of retail is leased to a Master Lessee for a 30-year term with a 30-year renewal option. The Master Lessee guarantees a monthly lease payment to the Parking Authority and is responsible for managing, maintaining, and leasing the individual retail units.

The Parking Authority is financially responsible for the debt service and operating expenses of the Oak Avenue Garage. All ground floor retail lease revenue and parking fees from the garage are utilized to pay operating and debt service expenses of the garage.

CASE STUDY 3.2 (continued)

The Parking Trust Fund contributed $2.5 million dollars to the overall project cost. The Parking Trust Fund's contributions repaid land acquisition costs that had been advanced by the Parking Authority during the land assemblage phase of the project.

Challenges:

The Parking Authority is responsible for the management of the Coconut Grove Parking Trust Fund. Prior to the construction of the Oak Avenue Garage, the Parking Trust Fund had received a significant amount of parking variance fees. Based upon community redevelopment and the amount of funds held in trust, the time had arrived to find an appropriate site and demonstrate to the Village business community the Parking Trust Fund and the Parking Authority's commitment to building a public parking facility. Finding an appropriate site was difficult, and the Parking Authority negotiated many months to assemble the two lots where the parking garage was ultimately built.

Contact: Arthur Noriega 305-373-6789 x 242

OAK AVENUE GARAGE, COCONUT GROVE, FLORIDA
ACTUAL CONSTRUCTION EXPENSES
416 PARKING SPACES, CITY OF MIAMI PARKING AUTHORITY, FLORIDA

Construction Costs	Year 1998/99 Dollars
Hard Construction—Garage	
416 spaces @ $8,000 per space	$3,328,000.00
Revenue Control System, Cashier Booth & CCTV	
416 spaces @ $250.00 per space	$104,000.00
Hard Construction - Retail Raw Shell Space	
16,000 sq. ft @ $100.00 per sq. ft	$1,600,000.00
Hard Construction—Total	**$5,032,000.00**
Construction Contingency @ +1–5.00% of Hard Total	$251,600.00
Design, Supervision, Survey, Testing, Permitting	
and Project Management @ +1–11.25% of Hard Total	$566,100.00
Base Construction Costs	**$5,849,700.00**
Land Acquisition	$2,500,000.00
Demo, Environmental & Tree Replacement	$800,000.00
Total Development Cost	**$9,149,700.00**
Financing	
Cost Of Issuance (estimate)0.02775	$175,000.00
Gross Bond Insurance Premium (estimate)0.0094	$22,000.00
Title Insurance (estimate)0.00253	$10,000.00
Deposit to R&R Fund	$0.00
Deposit to D/S Reserve Fund:	$0.00
Deposit to Land Acquisition Fund	$2,500,000.00
Deposit to (net funded) Construction Fund	$5,849,700.00
Deposit to Site Demo & Environmental Fund	$800,000.00
Unadjusted Development and Financing Costs	**$9,356,700.00**
Coconut Grove Parking Trust Fund Payment:	**$2,500,000.00**
Parking Authority Capital Contribution	$0.00
Earned Interest on Bond Const. Funds (estimate).	$15,000.00
Rounding Amount	$58,300.00
Par Amount of Bonds	**$6,900,000.00**
Annual Debt Service Payment	
30-year issue @ 4.50%, blended payment schedule	**$419,536.44**
Parking Facility Operating Expense	
416 Garage spaces @ $350.00 each / Year 1999	**$145,600.00**
0 Surface Lot spaces @ $0.00 each / year	$0.00
TOTAL ANNUAL DEBT SERVICE & OPERATING EXPENSE ESTIMATE	**$565,136.44**

CASE STUDY 3.3
GENERAL MOTORS GARAGE
DETROIT, MICHIGAN

Owner:	**Detroit/Wayne County PA.**	**Financing:**	**Park. Auth. Revenue Bonds**
Year on-line:		**Total Cost:**	**$41,000,000**
Capacity:	**1,200 spaces**	**Guaranteed:**	**no**
Mixed Use:	**18,000 s.f. Ground-Level Retail**	**Context:**	**Urban**

Project Description:

The city of Detroit owned the land, and the Port Authority had been maintaining the existing parking lots on the site. Part of the ongoing downtown revitalization efforts, the waterfront mixed-use development proposal with a garage, was determined feasible for this site. GM had invested over $550 million at the waterfront in downtown Detroit. It moved its world headquarters to the Renaissance Center in the mid-1990s, thus making a significant commitment to the downtown Detroit central business district. Further, the Detroit Riverfront Conservancy, co-chaired by GM and the City of Detroit, is developing over six miles of waterfront improvements through a promenade that fronts this facility. The City of Detroit is also preparing property to the east of this development for mixed-use residential/commercial/retail redevelopment. So, the new garage facility represented minimal risk for the Port Authority.

The garage is part of the $43 million mixed-use facility on the waterfront in downtown Detroit. With 18,000 square feet of ground-floor retail and almost 1,200 parking spots, this facility will facilitate the transfer of OnStar Corp. (150 employees) to General Motors World Headquarters at the Renaissance Center. The Port Authority will own the deck and lease it back to GM through an operating lease, thus making this a synthetic lease transaction. GM constructed this garage in a period of two years. It was a design-and-build construction method.

Project Financing:

The Detroit/Wayne County Port Authority, a public purpose authority, issued revenue bonds of $43 million to construct the mixed-use facility, which the garage is part of. Forty-one million dollars ($41 million) was the cost of garage construction, of which $1.5 million went to issuance cost. The financial model was successful for GM because this is an operating lease rather than a capital lease, thus keeping the project off its balance sheets as a liability. The Port Authority negotiated a 5-year ground lease with GM.

GM has guaranteed payments to the Port Authority under a five-year contract. There are options at the end of each 5-year term that essentially protect the Port Authority from being stuck, long-term, with a large remaining principal balance. GM realizes certain tax advantages from this arrangement, maintaining its credit rating for other projects, and preserving its debt capacities for other capital projects. The Port Authority realized an up-front application fee and receives annual payments throughout the length of the project. This "extra" income allows the Port Authority to leverage other waterfront improvement projects through various ways (e.g., planning/feasibility studies, appraisals).

The debt is being paid off by guaranteed payments by GM. GM is using parking revenues to supplement this payment. However, by using the Port Authority as the bonding entity, GM obtained a very

CASE STUDY 3.3 (continued)

competitive rate and favorable terms that allow it to pay down the debt over 30 years, broken into 5-year renewable options.

Challenges:

For the Port Authority, the challenges were minimal. The constituent units of government (City of Detroit, Wayne County, and State of Michigan) were supportive because they realized consecutive projects similar to this could mean a road to self-sufficiency for the Port Authority. These are revenue-generating projects for them. One thing to mention: at one time, there were many cooks in the kitchen. GM has many people who help them navigate through deals like this. And, in turn, the Port Authority had underwriters, tax attorneys, bond lawyers, and so on who weren't as familiar working with an entity like GM. At one point, the Authority had a small delay trying to explain to one of the governing units that it was approving a financing, not the actual project. The project had already passed through a separate approval process. The Port Authority's ability to finance had to go through an approval process over and above the project's approval process.

Contact: John Kerr, Director of Economic Development and Grants Management, Detroit/Wayne County Port Authority 313-331-3842, ext 311

CASE STUDY 3.4
WEST CHESTER UNIVERSITY GARAGES (Sharpless Street and Matlack Street)
WEST CHESTER, PENNSYLVANIA

Owner:	**West Chester Borough, PA**	**Financing:**	**General Obligation Bonds**
Year on-line:		**Total Cost:**	**$9,897,905**
Capacity:	**913 spaces**	**Guaranteed:**	**Yes, West Chester Borough**
Mixed Use:	**Performing Arts Center**	**Context:**	

Project Description:

West Chester Borough is a suburb 25 miles west of Philadelphia. West Chester University is the second largest university in Pennsylvania's State System of Higher Education with close to 13,000 students (12,697 enrolled). The university is spread out between the Borough of West Chester and the Borough of Goshen. Following completion of its Comprehensive Campus Facilities Plan in October 2000, West Chester University recognized parking as a major constraint on growth. In its Comprehensive Plan adopted in 2000, the Borough views parking and a high density of student housing in its southeast and southwest planning areas as a constraint. The university conducted a parking demand analysis study in which it concluded that 497 new parking spaces would be needed to accommodate peak demand. The university's objective in addressing this constraint was to accommodate parking while conserving green space and limiting costs.

However, its status as a state-owned educational institution placed additional constraints on the university. Building the facilities would have required the university to go through a long bureaucratic process that might have delayed the project longer than was necessary, aggravating the parking problem in the process. As a result of these multi-prong concerns, the university entered into an agreement with the Borough to design, fund, build, and manage two structures that would accommodate up to 913 spaces. The university owned the land—existing surface lots on campus ground, which it leased to the Borough for 30 years specifically for the Parking Structures.

The Borough took care of acquiring all the requisite permits, licenses and certificates, as well as making sure that the university project complied with every applicable regulation. The Borough also did the hiring of the relevant professionals, including but not limited to professionals for the design, engineering, construction and maintenance of the parking structures. The university uses its system revenues or student fees to pay off the debt assumed by the Borough, on top of the management fees and operational expenses associated with the Parking Facilities. In return, net revenues earned from the management of the parking structures are turned over to the university.

Project Financing:

The Borough issued tax-exempt parking revenue bonds as well as a pledge of its full faith, credit, and taxing power to receive favorable interest rates or AAA rating on the debt assumed. Furthermore, the Borough has made provisions for a Parking Revenue Sinking Fund and has retained authority to issue Additional Bonds to refund its existing bond obligation, to complete the existing project, or to acquire, construct, or complete additions to the Parking Facilities.

The university project consists of one stand-alone garage containing 410 spaces—the Sharpless Street Garage—and one mixed-use garage having 445 spaces, the Matlack Street Garage. The Matlack Garage is being built with a new School of Music and Performing Arts ("SOMPAC") to be used for permit parking and for visitors to the performance center.

CASE STUDY 3.4 (continued)

Construction hard costs were the biggest drain on the Project's budget, at approximately $9.518 million. The design, or soft cost, of the project came to $379,905, with a debt service reserve of $7,050. It cost the Borough $174,619 to issue the debt. The Borough issued $9.67 million of AAA bonds with the university contributing $607,806 to complete the project. The Borough projected annual user fees of $146,000 and an annual subsidy of $574,000 from the university's increased student fees for a total operational budget of $720,000.

The benefits to the Borough and university were evident. For the Borough, the parking structures reduced the impact of high-density student housing on residential neighborhoods near the university. With regard to the university, it was afforded a cost-efficient construction, financing, and space-efficient mechanism for providing parking. In addition, it made building the new performance center possible, which will have a positive long-term effect on the economic vitality of both the Borough and the university.

Contact: Ernie McNeeley, Borough Manager, 401 E. Gay St. West Chester Borough, PA 19380
610-692-7575; rniem@west-chester.com

CASE STUDY 3.5
BRADLEY AIRPORT GARAGE
WINDSOR LOCHS, CONNECTICUT

Owner:	**State of Connecticut, DOT Department of Transportation**	**Financing:**	**State of Connecticut Special Obligation Bonds**
Year on-line:	**2001**	**Total Cost:**	**$40,218,000**
Capacity:	**3,453 spaces**	**Guaranteed:**	**Yes, APCOA (DBOM entity)**
Mixed Use:	**None**	**Context:**	**Airport/On-site**

Project Description:

Wiley Engineering, as part of a consulting team, was the consulting engineer responsible for preparing the feasibility study for the recently completed 3,500-space parking garage at Bradley Airport. The project was delivered in a unique Design–Build–Operate–Manage (DBOM) format. Wiley worked closely with the design team, the finance team, and the state in developing the final operating program. A detailed series of revenue and expense projections and a 30-year financial pro forma were included in the final report. The complete report is featured in the Bond Issue official statement. The project bonds totaled $47,665,000 and were issued in July 2000.

For More Information Contact:

Wiley Engineering P.C.
1383-44 Veterans Memorial Highway
Hauppauge, NY 11788
631-724-4777 ~ 631-724-4777 (fax)
ggiosa@wileyengineering.com

CASE STUDY 3.6
LOUIS ARMSTRONG AIRPORT GARAGE
NEW ORLEANS, LOUISIANA

Owner:	**Kenner Parish**	**Financing:**	**General Obligation Bonds**
Year on-line:	**2003**	**Total Cost:**	
Capacity:	**4,500 spaces**	**Guaranteed:**	**Yes, New South Dev., LLC**
Mixed Use:	**None**	**Context:**	**Airport/On-site**

Project Description:

The City owned the land next to New Orleans Airport in Kenner Parish, Louisiana. The previous garage/hotel contractor went bankrupt before the project was completed (rehab and expansion of an existing garage). The New Orleans Aviation Board indicated it wanted no financial responsibility for the project. It would lease the land to a developer for 40 years at a base rent, with participation. Central Parking responded by recommending the Board establish a 501(c)(3) (nonprofit) organization) to lease, build, and manage the garage project. "New South Development, LLC," a nonprofit parking and facilities corporation (PFC), was formed. This was a partnership between Burns Management Realty, a New Orleans–based DBE firm, and Central Parking. Central Parking would operate and build the project for this organization and Ambach (insurers) would insure the project. New South was able to issue tax-free bonds specifically for airport facilities, which was a category allowed by the bonding laws. New South would pay the City $140,000 in ground rent, yielding $120 million total, which was $80 million net more than would have been realized in a traditional development project. The lease stipulated that the PFC (New South) pay a fixed-base rent plus participating rent equal to the operating cash flow of the new garage. At the earliest of the repayment of the bonds or the end of the lease term, the parking facility would be turned over to the airport at zero cost.

Project Financing:

A critical component of the transaction was that Central Parking provided a 100 percent completion guarantee for the development of the garage. The guarantee was backed by a $5 million letter of credit, which was key in securing insurance for the bond underwriting and for assuring an investment-grade rating from Standard & Poor's. The bond insurer agreed to rely on the revenue from the new garage to underwrite the transaction and provide bond insurance.[15] New South proceeded to issue $46.2 million in bonds. Despite the events of 9/11, the bonds were sold in December 2001, and two weeks later they broke ground on the project. The garage opened in October 2003.

The garage employed two cost structures: one for short-term and one for long-term parking. Short term cost $15 per stall and long term cost $10 per stall. The garage needed only 2,500 cars in short term (to get Ambach insurance) but made it expandable to 4,500 long term. Central had to be careful that the pricing was correct—if the long-term price was too low, everyone would park there. Once long term filled up, Central made the extra 1,500 stalls available in short term, changing short-term's rate to $10/stall to accommodate the long-term overflow. Revenue was divided such that short-term revenues went to the Airport and long-term revenues went to Central Parking.

[15]"Innovations in Public/Private Financing at Louis Armstrong International," by Richard Jonardi, *Parking* magazine, National Parking Association, Jan./Feb. 2005, p. 31-33.

CASE STUDY 3.6 (continued)

Terms of the deal included that if there were ever another 9/11 or other disaster, no responsibility would accrue to the Airport; New South had to guarantee a certain basic rent ($15 per stall short term and $10/stall long term), to cover a 1.8 debt-coverage ratio. The $3 million debt service generates $1.5 million in participating ground rate to the Airport. As a result of meeting these conditions, New South returned an $800,000 premium to the Airport for unused insurance coverage.

The idea for establishing a nonprofit organization to build and operate the parking came from parking prototypes at college campuses. Johns Hopkins also has a 501(c)(3) parking entity—a public entity that can issue bonds and act as a tax management company. Campus housing makes money; parking doesn't. But if 1,000 stalls can support the cost of a garage plus the replacement surface parking, it can work. Colleges can pool all parking facility money to help offset costs of garages that don't always fill up.

The New Orleans Airport wanted bonds off its balance sheet. Central has a guarantee that it can raise rates every 3 years. The Airport appointed all board members to the nonprofit. It approved the design and budget of the garage and in effect controls the operations. But if the economy goes bust, the Airport does not hold responsibility. Central took a completion guarantee only; Ambach holds the bonds and would have to pay off the bondholders if there ever were a default.

Contact: Bif Porter, Central Parking Corp, 2410 21st Avenue South, Nashville, TN 37212
615-850-6208; bporter@parking.com

CASE STUDY 3.7
METRO STATION GARAGE
GROSVENOR, MARYLAND

Owner:	**Washington Metro Area Transit Auth.**	**Financing:**	**General Obligation Bonds**
Year on-line:	**2005**	**Total Cost:**	**$30,000,000**
Capacity:	**1,500 spaces**	**Guaranteed:**	**Yes, Montgomery County**
Mixed Use:	**none**	**Context:**	**Airport/On-site**

Project Description:

Metro (operated by Washington Metropolitan Area Transit Authority) owned the land and had a surface parking lot at Grosvenor Metro station. This lot could not provide adequate parking for Metro riders. Recently, mass-transit initiatives and policies resulted in growing Metro ridership in Montgomery County, Maryland.

Visitors to the Mall located 5 miles from the Grosvenor station also use this parking lot. The New Strathmore Concert Hall located close to the station utilizes the parking for evening concerts. The Montgomery County Department of Public Works and Transportation (DPWT) decided to build a new garage at this location. DPWT's Division of Capital Development managed the construction project. The garage is operated and maintained by Metro.

The new garage opened in July 2005. It has six levels of parking, served by several stairways and four elevators. It features customer-assistance phones, glass-enclosed stair towers, and an open design to enhance visibility and security. Parking spaces in this garage total 1,500, and there is one more building being planned that is to have 500 spaces for parking as well as other residential and commercial uses. It is a design-and-build construction project.

There were several debates before the County planning board regarding the garage plan. Staff members and metro representatives proved with arguments that the garage would take about 1,200 cars off the road by increasing park-and-ride usage. The council wanted to build housing near the train station to serve the young professional population.

Now, after the new garage has opened with 1,500 spaces, the County is building another structure adjacent to the Metro garage. It will have 500 parking spaces on lower floors and housing on the upper floors. It will also have some commercial areas. Thus, Metro garage is intended to initiate further development of the areas around the train station in keeping with New Urbanism principles.

Project Financing:

The cost of the garage is about $30 million, which includes a $500,000 grant from the State of Maryland for the "Arts Walk." The Arts Walk will extend from Metro to the new Strathmore Concert Hall. Financing for the garage was provided from County revenue bonds backed by a special parking surcharge at all Montgomery County Metro stations. Parking at the garage costs $4.00, the same as in Metro lots.

The garage is paid for entirely by parkers. Of the $4 parking charge, $1.50 is the parking surcharge that pays for the garage. Metro gets the remaining $2.50 to cover operations. The garage uses the SmartTrip fare card system for payment, as is the case for all of Metro's parking facilities. The 2004 financial statement shows that $1,682,005 was an interest-only payment; the 2005 payment was $3,158,381, which consisted of interest and principal payment. The garage is currently deeded by the County to Metro; Metro will own the garage in 2025. It will always be open for public parking.

Structure of finance: From $30 million total project costs, $25 million was used for construction hard cost and about $5 million was used for soft costs. In the first 6 years, while the project idea was being developed, the County received $100,000; in the 18-month construction period, about $20 million in bonds were issued by the County. The State DOT also provided a grant of $9 million.

Contact: Kassa Seyoun, Project Manager, Montgomery County Public Works Dept. (240-777-6114)