APPENDIX U

Parking Planning Study

WALKER
PARKING CONSULTANTS

MIDTOWN REDEVELOMENT

ROCHESTER, NEW YORK

PARKING PLANNING

PROJECT # 11-2343.00

FINAL DOCUMENT

October 8, 2008

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October 8, 2008

Sergio Esteban
President/CEO
LaBella Associates
300 State Street, Suite 201
Rochester, NY 14614

Re: Midtown Parking Planning Final Report
Walker Project No. 11-2343.00

Dear Mr. Esteban:

Walker Parking Consultants is pleased to submit the attached final report of the parking planning study for Midtown Redevelopment. This report summarizes our projections regarding the conceptual parking plan for the development area.

We appreciate the opportunity to be of continued service to LaBella Associates and the Midtown Development Planning Team. If you have any questions or comments, please do not hesitate to call.

Sincerely,

WALKER PARKING CONSULTANTS

Andrew J. Vidor

Philip J. Baron

Andrew J. Vidor, E.I.T.
Design Engineer III

Philip J. Baron
Project Manager

Enclosure

WALKER
PARKING CONSULTANTS

MIDTOWN REDEVELOMENT

ROCHESTER, NEW YORK

PARKING PLANNING

Prepared for:
LABELLA ASSOCIATES

PROJECT # 11-2343.00

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EXECUTIVE SUMMARY

The City of Rochester, Rochester Economic Development Department, and Empire State Development are working in collaboration to bring the proposed redevelopment of Midtown to fruition. As such, Walker Parking Consultants ("Walker") has been retained to provide parking consulting services to the Midtown Development project team and assist with the formation of a parking plan that specifically addresses the appropriate amount of parking supply needed to service the unique combination of proposed land uses.

The result of this report will allow The Design Team, City of Rochester, State of New York, Empire State Development, PAETEC Corporation and other stakeholders a better understanding of parking as it relates specifically to the planning of Midtown, its associated land uses, and urban densities. As redevelopment continues to evolve and site specific developments are designed, parking planning will also require additional design in order to most appropriately fit the needs of each phased building.

Our evaluation of shared parking between the proposed future developments and land densities recommends 918, 2,289, and 2,688 parking spaces are needed to accommodate the Low, Medium, and High Density Developments, respectively. These parking demands include reduction factors to account for dynamics specific to the land use types and driving characteristic in Rochester. A further discussion of the reduction factors as well as methodology for the shared parking model is discussed further in this report.

The following report focuses on the study methods and results of the aforementioned research and analysis, and is presented to LaBella Associates to assist in making informed decisions with regard to the proposed Midtown Development. Specific sections of this report may not necessarily affect one another directly; however, were included to meet the needs of the overall planning for re-development and at the request of City and State agencies.

This report will present information necessary to understand the:

- Future needs of parking due to Midtown Redevelopment
- History of parking conditions in and around Midtown
- Considerations related to parking and their impact on the developments

SCOPE OF SERVICES

The scope of the analyses completed by Walker includes the following key tasks:

- Determined the number of parking spaces that are needed for the exclusive use of PAETEC Corporation in Phase I of the proposed development plan;
- Determined if additional parking supply is needed in the Midtown block;
- Determined the conceptual number of parking spaces needed for each of the three development scenarios considered in Phase II;
- Reviewed and discussed the City's historical relocation plans during facility repairs and where parkers should be relocated at the time of Phase I completion;
- Analyzed and recommended the location of parking facilities in relation to other proposed developments;
- Discussed the criteria for determining vehicle entry/exit locations with respect to surrounding streets for Phase II;
- Discussed the type of parking that is needed to serve Phase II developments;
- Discussed the impact of on-site vehicular circulation as it relates to various land uses, the impact of parking location on pedestrian movement, and the potential for future parking expansion for Phase II developments;
- Discussed conceptual solutions that address queuing areas/lengths and on-street parking opportunities;
- Reviewed zoning code for the proposed Urban Renewal District as it relates to parking and commented on any potential challenges;
- Summarized the baseline inventory regarding existing parking spaces within a five- and ten-minute walking distance of the Midtown Development site; and
- Discussed strategies and techniques to incorporate parking into the architectural elements of a mixed-use development.

PROPOSED DEVELOPMENT PLAN

The plan for the Midtown Development project consists of two phases. The first phase includes the construction of a 500,000 SF corporate world headquarters for PAETEC Corporation with completion in 2011. Phase two of the development program has not been specifically determined, although three land use density scenarios have been recommended and conceptually identified by LaBella Associates with assistance from EDAW/AECOM. The second phase is likely to include additional mid-rise office, residential, hotel, retail, and restaurant area with construction likely to commence shortly after completion and absorption of Phase 1.

The following table provides an overview of the potential development scenarios considered by Walker in this report.

Table 1: Conceptual Development Scenarios

	Development Density Scenarios		
Land Use	**Low**	**Medium**	**High**
PAETEC Tower	0 SF	500,000 SF	500,000 SF
Mid-Rise Office	0 SF	88,000 SF	220,000 SF
Residential	237 units	265 units	294 units
Hotel	100 rooms	100 rooms	100 rooms
Retail	26,717 GLA	28,192 GLA	28,969 GLA
Restaurant - Fine Dining	20,448 GLA	21,379 GLA	21,709 GLA
Restaurant - Quick Service	13,484 GLA	14,204 GLA	14,459 GLA

LaBella Associates, August 2008

In all scenarios, the 1,844-space Midtown Parking Garage is slated to remain in place with structural and waterproofing repairs schedule to be performed in late 2009 or early 2010.

MIDTOWN REDEVELOPMENT SITE

The development site for the Midtown project is irregular in shape and generally bound by East Main Street to the north, East Broad Street to the south, Euclid Street, the intersection of Atlas Street and Chestnut Street to the east, and South Clinton Avenue to the west. The parameters of the Midtown Redevelopment Site are shown in the following figure.

Figure 1: Midtown Redevelopment Site

FUTURE PARKING DEMAND

The purpose of this section is to utilize shared parking methodology as a means to evaluate the future parking demand for Phase I and Phase II of the proposed Midtown Development. The results of this shared parking analysis identify the optimal number of parking spaces to meet the needs of the PEATEC Tower in Phase I and the proposed mixed-use development in Phase II.

SHARED PARKING METHODOLOGY

Walker Parking Consultants was commissioned by the Urban Land Institute (ULI) and the International Council of Shopping Centers (ICSC) to lead a team of parking and transportation planning experts to update the landmark publication, *Shared Parking*. Walker Parking Consultants was the lead consultant and principal author of the update, published November of 2005. The shared parking analysis herein reflects both the significant research that has taken place in the ULI/ICSC effort, as well as the experience of Walker Parking Consultants in performing shared parking analyses over the past two decades.

Shared parking is defined as parking spaces that can be used to serve two or more individual land uses without conflict or encroachment. One of the fundamental principles of downtown planning from the earliest days of the automobile has always been to share parking resources rather than to have each use or building have its own parking. The resurgence of many central cities resulting from the addition of vibrant office, residential, retail, and entertainment developments continues to rely heavily on shared parking for economic viability. In addition, mixed-use projects in many different settings have benefited from shared parking. There are numerous benefits of shared parking to a community at large, not the least of which is the environmental benefit of significantly reducing the square feet of parking provided to serve commercial development.

The ability to share parking spaces is the result of two conditions:

- Variations in the accumulation of vehicles by hour, by day or by season at the individual land uses; and
- Relationships among the land uses that result in visiting multiple land uses on the same auto trip.

For example, office buildings require parking spaces during daytime hours on weekdays, while restaurants and entertainment venues have

peak parking needs during the evening and weekends. The interplay of land uses in a mixed-use environment also produces a reduction in overall parking demand. For example, a substantial percentage of patrons at one business (restaurant) may be employees of PAETEC Tower or other downtown businesses (office). This is referred to as the "effects of the captive market." These patrons are already parking and contribute only once to the number of peak hour parkers. In other words, the parking demand ratio for individual land uses should be factored downward in proportion to the captive market support received from neighboring land uses.

Although the interplay of land uses can reduce the overall demand, it should be noted that there are limits imposed by proximity of land uses to each other and to parking facilities. While "shared parking" by definition is capitalizing on the different demand period for a combination of land uses, it is not logical to assume that a hotel (with peak demand in the evening) can share with an office building (with peak demand during the day) if the two land uses are too far apart. Human behavior restricts shared parking opportunities by limiting the distance users are willing to walk from a parking facility to their final destinations.

Our shared parking analysis begins with the application of base parking ratios to the proposed land uses. Walker's base parking demand ratios in the shared parking model are developed with data from previous project experience, surveys, data from the Urban Land Institute (ULI), the Institute of Traffic Engineers (ITE), and other reference materials.

The following table shows the unadjusted *base parking ratios* applied to each land use.

Table 2: Base Parking Demand Ratios

	Weekday				Total
Land Use	Visitor	Employee/Resident	Unit	Source	Weekday
Office	0.20	2.60	/ksf GLA	2	2.80
Community Retail	2.90	0.70	/ksf GLA	1	3.60
Restaurant - Fine Dining	15.25	2.75	/ksf GLA	2	18.00
Restaurant - Quick Service	12.75	2.25	/ksf GLA	2	15.00
Hotel-Business	1.00	0.25	/room	2,4	1.25
Residential Shared, Owned	0.15	1.70	/unit	2,3	1.85

Sources

1. *Parking Requirements for Shopping Centers* Second Edition. Washington DC: ULI-The Urban Land Institute, 1999.
2. *Parking Generation,* Third Edition. Washington DC: Institute of Transportation Engineers, 2004.
3. Data collected by Walker Parking Consultants.
4. Gerald Salzman, "Hotel Parking: How Much Is Enough?" Urban Land, January 1988.

Base parking demand ratios have been developed from industry research by land use category, for both a typical weekday and weekend. The shared parking projections prepared for the Midtown Development are calibrated to reflect the parking needs of the proposed mixed-use development on a typical weekday. These ratios are adjusted by site specific factors including drive ratio and non-captive factor specific to information about Rochester obtained from census information in order to customize the ratios for the subject development. The drive ratio reduces the overall parking demand for patrons arriving via mass transit, car-pooling, walking or riding a bike. The non-captive factor reduces the demand when uses are used congruently, such as when office employees patron a restaurant during their lunch hour or other retail services.

PHASE I DEVELOPMENT (PAETEC TOWER)

The planned PAETEC Tower is a Class A office tower consisting of 500,000 square feet. The projected parking demand generated by the tower is approximately 1,205 spaces on a typical weekday. This figure represents a 15% modal split reduction to account for car/vanpooling, and employee use of public transportation.

Table 3: Summary of PAETEC Tower Parking Demand

Land Use	Unit	Unadjusted Demand	Adjusted Demand
PAETEC Tower	500,000 SF	1,400	1,205

Source: Walker Parking Consultants, LaBella Associates & EDAW|AECOM, 2008

The existing Midtown Parking Structures has a supply of 1,844 parking spaces that should adequately accommodate the demand of 1,205 vehicles generated by the PAETEC building during a typical weekday.

PHASE I VEHICLE TRIP GENERATION

The peak vehicle trip generation for the PAETEC Tower was analyzed on the basis of two variables; number of employees and building size. Our analysis indicates that the peak weekday vehicle trip generation could range between 600 to 700 vehicles.

The summary of projected peak vehicle generation for the PAETEC Tower during a typical weekday morning and afternoon is presented in the following table.

Table 4: PAETEC Tower Peak Hour Vehicle Trip Generation

Number of Employees		**1,500**			
	AM Peak			PM Peak	
Enter (93%)	Exit (7%)	Total	Enter (11%)	Exit (89%)	Total
558	42	600	60.5	489.5	550

Building Size (SF GLA)		**500,000**			
	AM Peak			PM Peak	
Enter (93%)	Exit (7%)	Total	Enter (10%)	Exit (90%)	Total
651	49	700	62.5	562.5	625

Source: ITE Trip Generation, 7th Edition (Corporate Headquarters Building, 714)

PHASE I & II DEVELOPMENT

LaBella Associates and EDAW|AECOM provided Walker with three density development scenarios for evaluation that are summarized in the table below.

Table 5: Phase I & II Development Density Scenarios

	Development Density Scenarios		
Land Use	**Low**	**Medium**	**High**
PAETEC Tower	0 SF	500,000 SF	500,000 SF
Mid-Rise Office	0 SF	88,000 SF	220,000 SF
Residential	237 units	265 units	294 units
Hotel	100 rooms	100 rooms	100 rooms
Retail	26,717 GLA	28,192 GLA	28,969 GLA
Restaurant - Fine Dining	20,448 GLA	21,379 GLA	21,709 GLA
Restaurant - Quick Service	13,484 GLA	14,204 GLA	14,459 GLA

Source: LaBella Associates and EDAW/AECOM, Sept
Note: Retail and Restaurant uses are adjusted by 10% to convert from total square feet to gross leasable area (GLA).

PHASE II, COMPARISION OF DENSITY DEVELOPMENT SCENARIOS

CONCEPT 1: LOW DENSITY DEVELOPMENT

As shown in the following table, sharing parking between the different uses for the low density development scenario may result in a 25% reduction, from 1,230 to 918 spaces.

Table 6: Low Development Density Parking Demand

Demand Adjustments

Land Use	Unadj Demand	Month Adj Aug	Pk Hr Adj 7:00 PM	Non Captive Evening	Drive Ratio Evening	Demand Aug 7:00 PM
		Weekday				
Retail	77	69%	95%	50%	100%	25
Employee	19	80%	95%	100%	85%	12
Fine/Casual Dining	312	99%	100%	95%	100%	294
Employee	56	100%	100%	100%	85%	48
Fast Food	172	99%	80%	20%	100%	27
Employee	30	100%	90%	100%	85%	23
Hotel-Business	100	92%	75%	100%	66%	46
Employee	25	100%	20%	100%	85%	4
Residential Guest	36	100%	100%	100%	100%	36
Residential Reserved	403	100%	100%	100%	100%	403
Subtotal Customer/Guest Spaces	697					428
Subtotal Employee/Shared Resident Spaces	130					87
Total Parking Spaces	1,230					918

Summary

Development Scenario	Land Use	Units		Unadjusted Demand	Adjusted Peak Demand
Concept 1	PAETEC Tower	0	SF	0	0
	Mid-Rise Office	0	SF	0	0
	Residential	237	units	439	439
	Hotel	100	rooms	125	50
Low Density	Retail	26,717	GLA	96	37
	Fine/Casual Dining	20,448	GLA	368	342
	Quick Service Dining	13,484	GLA	202	50
			TOTALS:	1,230	918
				25% reduction	

Source: Walker Parking Consultants, LaBella Associates, & EDAW|AECOM, 2008

CONCEPT 2 - MEDIUM DENSITY DEVELOPMENT

As shown in the following table, sharing parking between the different uses for the medium density development scenario may result in a 24% reduction, from 3,024 to 2,289 spaces.

Table 7: Medium Development Density Parking Demand

Demand Adjustments

Land Use	Unadj Demand	Month Adj December	Pk Hr Adj 2:00 PM	Non Captive Daytime	Drive Ratio Daytime	Demand December 2:00 PM
		Weekday				
Community Shopping Center (<400 ksf)	82	100%	100%	45%	100%	37
Employee	20	100%	100%	100%	85%	17
Fine/Casual Dining	326	100%	65%	80%	100%	170
Employee	59	100%	90%	100%	85%	45
Fast Food	181	100%	90%	10%	100%	16
Employee	32	100%	95%	100%	85%	26
Hotel-Business	100	67%	60%	100%	66%	27
Employee	25	100%	100%	100%	85%	21
Residential Guest	40	100%	20%	100%	100%	8
Residential Reserved	451	100%	100%	100%	100%	451
Office 25k to 100k sq ft	26	100%	100%	100%	100%	26
Employee	282	100%	100%	100%	85%	240
Office >500,000 sq ft	100	100%	100%	100%	100%	100
Employee	1,300	100%	100%	100%	85%	1,105
Subtotal Customer/Guest Spaces	855					384
Subtotal Employee/Shared Resident Spaces	1,718					1,454
Subtotal Reserved Spaces	451					451
Total Parking Spaces	3,024					2,289

Summary

Development Scenario	Land Use	Units		Unadjusted Demand	Adjusted Peak Demand
Concept 2	PAETEC Tower	500,000	SF	1,400	1,205
	Mid-Rise Office	88,000	SF	308	266
	Residential	265	units	491	459
	Hotel	100	rooms	125	48
Medium Density	Retail	28,192	GLA	102	54
	Fine/Casual Dining	21,379	GLA	385	215
	Quick Service Dining	14,204	GLA	213	42
			TOTALS:	3,024	2,289
				24% reduction	

Source: Walker Parking Consultants, LaBella Associates, & EDAW|AECOM, 2008

CONCEPT 3 – HIGH DENSITY DEVELOPMENT

The following table demonstrates that sharing parking between the different uses for the high density development scenario may result in a 23% reduction, from 3,490 to 2,688 spaces.

Table 8: High Development Density Parking Demand

Demand Adjustment

Land Use	Unadj Demand	Month Adj December	Pk Hr Adj 2:00 PM	Non Captive Daytime	Drive Ratio Daytime	Demand December 2:00 PM
		Weekday				
Community Shopping Center (<400 ksf)	84	100%	100%	45%	100%	38
Employee	20	100%	100%	100%	85%	17
Fine/Casual Dining	331	100%	65%	80%	100%	172
Employee	60	100%	90%	100%	85%	46
Fast Food	184	100%	90%	10%	100%	16
Employee	33	100%	95%	100%	85%	27
Hotel-Business	100	67%	60%	100%	66%	27
Employee	25	100%	100%	100%	85%	21
Residential Guest	44	100%	20%	100%	100%	9
Residential Reserved	500	100%	100%	100%	100%	500
Office 100k to 500k sq ft	52	100%	100%	100%	100%	52
Employee	657	100%	100%	100%	85%	558
Office >500,000 sq ft	100	100%	100%	100%	100%	100
Employee	1,300	100%	100%	100%	85%	1,105
Subtotal Customer/Guest Spaces	895					414
Subtotal Employee/Shared Resident Spaces	2,095					1,774
Subtotal Reserved Spaces	500					500
Total Parking Spaces	3,490					2,688

Summary

Development Scenario	Land Use	Units		Unadjusted Demand	Adjusted Peak Demand
	PAETEC Tower	500,000	SF	1,400	1,205
Concept 3	Mid-Rise Office	220,000	SF	709	610
	Residential	294	units	544	509
	Hotel	100	rooms	125	48
High Density	Retail	28,969	GLA	104	43
	Fine/Casual Dining	21,709	GLA	391	218
	Quick Service Dining	14,459	GLA	217	55
			TOTALS:	3,490	2,688
					23% reduction

Source: Walker Parking Consultants, LaBella Associates & EDAW|AECOM, 2008

SUMMARY OF SHARED PARKING ANALYSIS

Based on the analysis performed herein, estimates of projected shared parking demand for each development density scenario are presented in the following table:

Table 9: Summary of Shared Parking Analysis for Phase I & II

Scenario	Shared Parking Demand	Peak Month	Peak Time
Low	918	August	7:00 PM
Medium	2,289	December	2:00 PM
High	2,688	December	2:00 PM

PHASE I

Once scheduled construction of PAETEC Tower is completed in the fall of 2011 an additional 1,200 employees are anticipated to occupy the tower. It is anticipated that the new demand of 1,205 vehicles will be accommodated by the existing 1,844 parking spaces in the Midtown Parking Garage. Approximately 444 (unadjusted demand) or 639 (adjusted demand) parking spaces will remain after the demand is absorbed into the Midtown Parking Garage.

PHASE II

As Phase II parking demand ranges by 1,770 spaces between the low and high density developments and the actual layout of the buildings is not confirmed we recommend these additional spaces should *not* be considered additional supply available for other uses until Phase II development plans are confirmed by the project team. Structural systems of the proposed Phase II developments may impact the existing parking stalls and reduce the overall available parking supply.

The parking demand projected in the Phase II range depends on the specific development program and density. Nonetheless, all of the parking requirements for Phase II development will be met by on-site parking accommodations. Parking may be provided through a mixture of surface and structured parking (above and/or below grade).

OTHER DEVELOPMENTS

There are two known developments that are planned near the Midtown Development site that will impact the use of parking in downtown Rochester. A description of the projects and assumed parking considerations are given based on the most current information available during the preparation of this study.

ESL

ESL Headquarters plans to relocate to downtown Rochester. ESL's prospective development site is bounded by South Clinton Ave, Woodbury Blvd, Chestnut Street, and Pitkin Street. Once opened in early 2010, ESL plans to bring 350 employees downtown. At full occupancy 500 employees are anticipated to occupy the ESL headquarters. A 550-space parking structure is included in the design of the development with an additional 60-space surface lot. Parking demand for the development will be entirely within the project boundaries. The result of parking being contained on site does not affect parking for Midtown Redevelopment or other areas downtown.

RENAISSANCE SQUARE

When fully developed and operational in 2012 the Renaissance Square project will provide new retail shopping, a transportation center, and the Monroe Community College and Performing Arts Center. The development is proposed to be located to the west of Midtown. A review of Allee King Rosen & Fleming's (7/25/08) Environmental Assessment, Chapter 9 *Vehicle Traffic and Parking* was completed to identify the potential parking impact. Key changes to the parking supply are presented below:

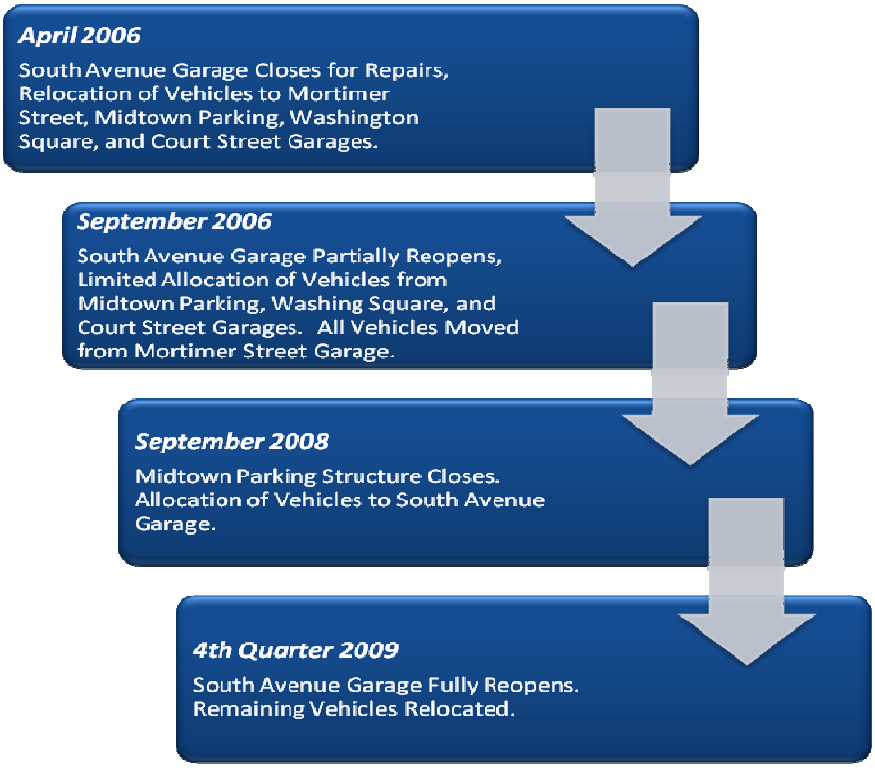
- Loss of 370 surface parking spaces
- Loss of 38 on-street parking spaces along Mortimer Street
- Gain of 35 surface parking spaces

The report identifies that the additional demand for parking will be accommodated in the surrounding parking supply within 1,000 feet of the Renaissance Square Development excluding Midtown Parking Garage.

PARKING RELOCATION HISTORY

In recent years, the City of Rochester has had to relocate parking patrons among various parking facilities due to actual and impending structural issues that required immediate attention. The actual number of parkers relocated to specific parking locations is uncertain, therefore approximate figures and a qualitative discussion on the relocation process is presented herein. Shown in the following figure is an historical review of vehicle relocation beginning with the collapse of the South Avenue Parking Garage Helix, through the closure of Midtown Parking Garage.

Figure 2: History of Parking Relocation



SOUTH AVENUE PARKING GARAGE CLOSURE

The circular helix at the South Avenue Parking Garage collapsed in April of 2006. The helix collapse resulted in the closure of the parking ramp for extensive structural repairs. A total of 900 – 950 vehicle spaces were lost due to closure of the garage. Vehicles that were parked in the South Avenue Parking Garage were relocated to Mortimer Street, Court Street, Washington Square, and Midtown Parking Garage.

SOUTH AVENUE PARKING GARAGE PARTIAL REOCCUPANCY

The South Avenue Parking Garage reopened for partial occupancy after partial completion of structural repairs in September of 2006. Monthly parkers were relocated in their entirety from Mortimer Street and partially from Court Street and Midtown Parking Garage.

MIDTOWN PARKING GARAGE PARTIAL CLOSURE

The Midtown Parking Garage was closed to transient parkers on July 25, 2008. Transient parkers using services in and around Midtown are able to use other sources of parking within a close proximity including:

- On-street parking;
- Mortimer Street Parking Garage;
- East End Parking Garage;
- St. Joseph Parking Garage; and
- Private off-street parking.

MIDTOWN PARKING GARAGE CLOSURE

As of September 30, 2008 the Midtown Parking Garage will be permanently closed until redevelopment of the site is complete. Monthly parkers that work within the vicinity of Midtown will be relocated to Mortimer Street Parking Garage, East End Parking Garage or St. Joseph Parking Garage. Other monthly parkers that do not work within the area of the Midtown Parking Garage will be required to relocate to other locations or where additional parking is available at the above mentioned parking garages.

Users of Midtown Parking Garage that were not guaranteed parking in the three garages discussed below should utilize other City owned or private facilities in areas of town that are proximate to their work. Other alternatives include using various forms of public transportation to commute to and from work.

SOUTH AVENUE PARKING GARAGE REOPENS

The South Avenue Parking Garage is scheduled to reopen for full occupancy after completion of structural repairs in the fourth quarter of 2009. Any remaining monthly parkers not previously relocated to South Avenue will be moved from the Mortimer Street Garage.

FUTURE PARKING RELOCATION STRATEGY

The Midtown Parking Garage currently has a supply of 1,844 parking spaces that is used primarily by the buildings surrounding the area known as Midtown, including the indoor mall and office tower directly above the parking garage. The garage is currently utilized at about 74% capacity by monthly and transient parkers. Parking overall is currently adequate in the Midtown area.

MIDTOWN PARKING GARAGE RELOCATION PLAN

As of September 30, 2008 the Midtown Parking Garage will be permanently closed until demolition of existing buildings above the garage and construction of PAETEC Tower is complete. Repairs and maintenance will also be completed on the garage before it reopens.

Parkers currently holding monthly parking cards that work in and around the Midtown site will be relocated to three surrounding parking garages. Approximately 1,300± parking spaces are available between the three parking garages located within a short walking distance of the Midtown Parking Garage.

Parkers with monthly cards currently working in the buildings listed below will be accommodated by the 700 available spaces in the Mortimer Street Parking Garage.

- Granite Building
- Alliance Building
- Chase Tower
- Clinton Square
- Xerox Square
- Excellus Building
- Frontier/Three City Center Building

Parkers with monthly cards currently working in the buildings listed below will be accommodated in the 300 available spaces at the East End Parking Garage.

- 50 Chestnut Building
- Eastman School of Music
- HSBC Plaza Building
- Miller Center
- Neisner Building
- N.Y. State Appellate Court
- RG&E Building, 111 East Avenue
- Rochester District Heating (RDH) Building
- Sagamore Building

Parkers with monthly cards currently working in the buildings listed below will be accommodated in the 300 available spaces at the St. Joseph Parking Garage.

- Bank of America Building
- Reidman Building
- Triangle Building

A shortage of 544 off-street parking spaces will result due to the closure of Midtown Parking Garage and the reallocation of monthly patrons to the Mortimer Street, East End and St. Joseph Parking Garages. The shortage of parking will be a result prior to the construction of PAETEC Tower.

PARKING SUPPLY WITHIN WALKING DISTANCE OF MIDTOWN

The parking supply within a five and ten-minute walking distance of Midtown Parking Garage was evaluated to determine the existing parking supply as well as the adequacy of those parking spaces. Data was compiled from Walker Parking Consultants *2008 Comprehensive Downtown Parking Study* to obtain the existing parking supply and adequacy. The table shown to the right provides a reference of walking distances with respect to time.

Approximately 674± parking spaces are currently available within a five-minute walk of the Midtown Parking Garage. Of the available parking supply within a five-minute walk, approximately 125± spaces are unused on a daily basis. A five-minute walk results in a distance of

Average Walking Speeds and Distances

Avg. Walking Speed = 3 MPH

1 Minute	= 264 feet
5 Minutes	= 1,320 feet
10 Minutes	= 2,640 feet
15 Minutes	= 3,960 feet
20 Minutes	= 5,280 feet
25 Minutes	= 6,600 feet
30 Minutes	= 7,920 feet

approximately 1,320 feet. Note that the supply and adequacy does not include the currently closed Midtown Parking Garage.

Additionally, there are approximately 13,408± parking spaces available within a five- to ten-minute walking distance of Midtown. This parking supply *excludes* the 1,844 parking spaces at the currently closed Midtown Parking Structure. Of the total parking supply within this walking radius, approximately 8,107± spaces are unused on a daily basis. A ten-minute walk or approximately 2,640± feet is considered to be an acceptable walking distance in a dense central business district such as Rochester. The unused parking supply in the market area could accommodate the projected parking deficit of 544 parking spaces that may ensue after relocation of monthly card holders following the closure of the Midtown Parking Garage.

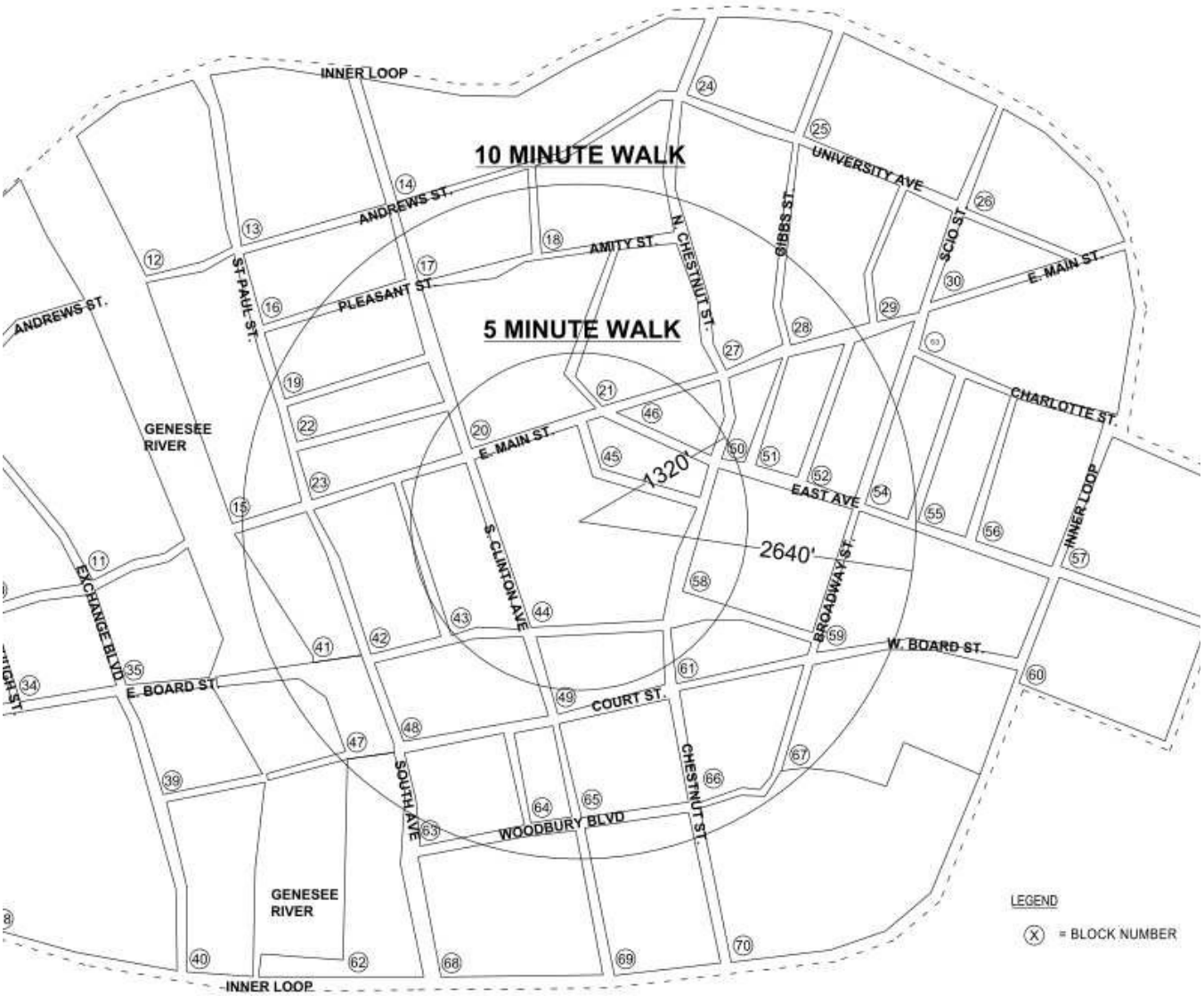
The following table and figure show the existing parking supply within a ten-minute walking radius of the Midtown Parking Structure. The figure identifies the associated block numbers and the resulting five- and ten-minute walking rings.

Table 10: Parking Supply within 10 Minute Walking Distance of Midtown Development

Block #	Walking Distance	Public Lot	Public Garage	Private Lot	Private Garage	Off-Street Supply	On-Street Supply	Total Supply
43	5 Min. or Less	0	0	0	390	390	48	438
45	5 Min. or Less	0	0	80	0	80	10	90
46	5 Min. or Less	0	0	0	80	80	8	88
49	5 Min. or Less	0	0	0	0	0	8	8
Sub-Total	**5 Min. or Less**	**0**	**0**	**80**	**470**	**550**	**74**	**624**
15	5 - 10 Min.	0	500	25	0	525	35	560
16	5 - 10 Min.	101	0	151	0	252	19	271
17	5 - 10 Min.	66	0	30	0	96	30	126
18	5 - 10 Min.	70	0	22	0	92	23	115
19	5 - 10 Min.	360	0	0	0	360	27	387
20	5 - 10 Min.	173	376	0	624	1,173	31	1,204
21	5 - 10 Min.	75	0	19	0	94	20	114
22	5 - 10 Min.	0	600	0	0	600	16	616
23	5 - 10 Min.	0	0	0	0	0	7	7
27	5 - 10 Min.	81	0	150	0	231	81	312
41	5 - 10 Min.	0	0	20	0	20	32	52
42	5 - 10 Min.	0	1,659	0	0	1,659	6	1,665
47	5 - 10 Min.	0	0	8	0	8	57	65
48	5 - 10 Min.	0	0	1,014	0	1,014	9	1,023
50	5 - 10 Min.	0	0	0	0	0	13	13
51	5 - 10 Min.	0	0	35	0	35	14	49
52	5 - 10 Min.	0	1,282	10	0	1,292	12	1,304
54	5 - 10 Min.	77	0	31	0	108	7	115
58	5 - 10 Min.	0	0	383	0	383	43	426
59	5 - 10 Min.	0	650	284	0	934	39	973
61	5 - 10 Min.	0	67	243	0	310	26	336
63	5 - 10 Min.	0	0	5	0	5	12	17
64	5 - 10 Min.	0	0	0	0	0	29	29
65	5 - 10 Min.	0	0	79	0	79	0	79
66	5 - 10 Min.	0	0	0	0	0	15	15
67	5 - 10 Min.	0	0	184	181	365	33	398
68	5 - 10 Min.	109	0	277	0	386	16	402
69	5 - 10 Min.	0	1,850	261	0	2,111	0	2,111
Sub-Total	**5 - 10 Min.**	**1,112**	**6,984**	**3,231**	**805**	**12,132**	**652**	**12,784**
Total	**≤ 10 Min.**	**1,112**	**6,984**	**3,311**	**1,275**	**12,682**	**726**	**13,408**

Source: Walker Parking Consultants Comprehensive Downtown Parking Study, 2008

Figure 3: Parking Supply within 5 & 10 Minute Walk of Midtown



Source: Walker Parking Consultants, 2008

PARKING PLANNING & DESIGN CONSIDERATIONS

VEHICLE QUEUING

Improper location of entry and exist points for vehicles in relation to street intersections or other street geometrics can cause vehicle queuing concerns while entering and existing off-street parking facilities.

Considerations for such include location of entry/exit point in relation to intersections or other existing entry/exit locations within the developments proximity.

Selection of the proper quantities of parking access revenue and control systems (PARCS) equipment is necessary to ensure that unsatisfactory vehicle queues do not occur at the entry and exit points of the off-street parking facilities during peak periods of activity. Improper selection of controlled access points during peak periods may result in congestion of traffic on-street. Selection of too few pieces of access equipment during peak periods when vehicles are leaving the off-street parking areas will result in unacceptable unloading time. The optimal number of parking control access points should be calculated based on factors including intended use, functional design, size, equipment processing rates, and access control equipment type for each specific off street parking facility.

Location of access equipment with relation to the street curb will also affect the queue length created when entering the facility. Placing the PARCS equipment too close to the street curb will result in an increased number of vehicles waiting on-street until they pass the access equipment. Processing rates of PARCS equipment is also a factor that will affect the queue lengths for entry and exit locations. A queuing analysis should be performed for each entry/exit location to determine the appropriate number of vehicles that should be accommodated in the queue as not to provide backups on the street.

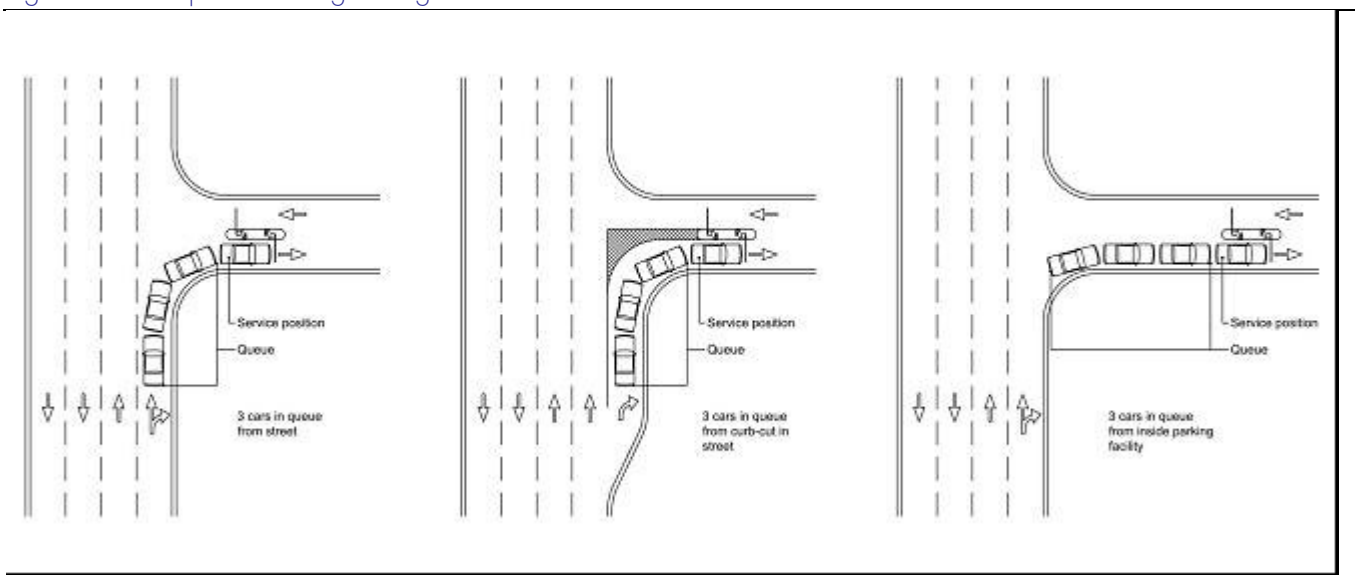
The type of PARCS equipment installed in a facility has a direct impact on the ability to load and unload vehicles in an acceptable amount of time. For example, a typical patron to cashier transaction takes approximately 27 seconds to process, allowing approximately 135 vehicles an hour through a manned exit lane. Exiting patrons, who have only to insert a validated pay-on-foot (POF) ticket into a ticket acceptor, can exit in 8.3 seconds, or at the rate of 435 vehicles per hour. If only half of the patrons used the self-service POF machines, the flow rate would be 283 vehicles an hour, an average of 12.7 seconds per transaction.

If long queue lengths are expected on-street while vehicles are entering the facility during peak periods, street geometric changes may be required to reduce the congestion and improve traffic flow for vehicles not using the facility. Solutions may include:

- Removing on-street parking in front of the entrance of the facility. This allows vehicles to pass the cars waiting to turn into the facility.
- Providing a left turn lane for vehicles entering the parking facility to reduce congestion on the street grid.
- Providing curb cuts to allow vehicles waiting to turn into the facility an opportunity to move out of the flow of traffic. Length of curb cut should be calculated for the specific queues anticipated to occur based on peak volumes and allowable traffic delays on-street.

The following figure shows conceptual queuing strategies for future consideration.

Figure 4: Conceptual Queuing Strategies



Source: Walker Parking Consultants

ON-STREET PARKING

On-street parking can serve to buffer pedestrians from vehicle travel, slow traffic to a safer, more livable speed, provide convenient parking locations for nearby businesses, allow businesses and residences to reduce the amount of off-street parking, and reduce the "heat island" effect and enhances urban vibrancy by improving the public realm. The principle has carried over to Town Center type of developments which often have on-street parallel or angled parking in the center of the development, with the remaining parking in lots or structures behind the buildings.

On-street parking is recommended in and around the street grid of Midtown where there is a need for short-term parking. Generally short-term parking in an urban downtown includes durations between fifteen minutes and an hour. These spaces are intended to be used by short-term visitors of businesses located within a one- to two-minute walk of the parking space. In addition, on-street parking could be used by commercial vehicles making deliveries to the PAETEC Tower or other occupied office space within the mixed-use development.

It should be noted that on-street parking directly competes with off-street parking ramps and lots on the basis of location and price. It is not uncommon for municipalities to price on-street parking according to perceived economic thresholds in the community, rather than on the basis of value. When parking is priced based on value, the most convenient parking located in closest proximity to demand is priced higher than the other parking alternatives. On-street parking for the hotel, residential, and PAETEC or mid-rise office employees should be discouraged through the use of premium pricing strategies for short-term meters. An appropriately-set pricing strategy for on-street meters will likely discourage employees of nearby businesses from "feeding the meter" and encourage them to purchase off-street parking on a monthly basis. This allows for the intended users to have access to short-term parking spaces.

The proposed street grid provided by LaBella Associates allows for the construction of on-street parking and should be maximized. Maximizing on-street parking on the street grid will account for any parking that is lost due to building demolition and meeting the demand for short term needs. Current utilization of on-street parking in the downtown district is high and will likely continue after construction of business in and around Midtown is complete.

PARKING GARAGE COST

Costs to construct structured parking garages vary depending on many factors including:

- Above ground vs. below grade parking
- Mechanical and electrical systems required to be installed
- Type of construction
- Local economy factors
- Functional design types
- Mixed use vs. stand alone parking
- Façade aesthetics
- Climate conditions during construction

The total project cost most often includes, but is not limited to, land acquisition costs, construction costs, and soft costs. Structured parking costs typically range from $15,000 to $20,000 per space for an above ground parking structure that does not require extensive mechanical and ventilation systems. The façade complexity of the facility can also adjust the price depending on detail or architectural significance. A below grade parking facility can range in costs from $20,000 to $30,000 per space or more. Cost variances for underground construction include excavation, fire suppression and ventilation systems, and retaining wall systems. The costs do not reflect land acquisition, utility relocation, design fees, demolition of other existing structures, and environmental remediation issues.

Soft costs include, but are not limited to, items such as architectural and engineering fees, construction contingency, financing costs, planning studies, legal fees, materials testing, and land surveys. The cost of these items can represent a figure that may range from 15% to 35% of the construction cost.

FUTURE PARKING EXPANSION

Identifying the need for future expansion during the design phase is critical in order to maximize the parking structures performance and to optimize the level of impact during expansion. Considerations for parking future expansion of a facility during initial design should include:

- Potential for code changes
- Designing for the future during original construction
- Site logistics
- Mixed use vs. stand alone parking
- Horizontal expansion vs. vertical expansion
- Construction logistics during expansion
- Functional design of initial construction vs. expansion
- Additional loads implied on foundations once expanded
- Available land use in the future
- Present value cost of construction compared to future value
- Current development demand vs. future development demand

ACCEPTABLE WALKING DISTANCES

When planning for the location of future parking on Midtown's site it is important to consider the walking distance from parking facilities and the intended user's final destination within the development. Walker has developed the level of service (LOS) approach to parking design. The level of service classification system was modeled after traffic engineering LOS classification system and includes:

- LOS A is best or ideal
- LOS B is good
- LOS C is average
- LOS D is below average but minimally acceptable

The following table provides the walking distance for a variety of conditions and its associated LOS. Based on the development site, walking will be done through a surface parking lot, which equates to 350 feet for LOS A; 700 feet for LOS B; and 1,050 feet for LOS C, as shown in the following table.

Table 11: LOS Conditions: Walking Distances

Level of Service Conditions	A	B	C	D
Climate Controlled	1,000 ft	2,400 ft	3,800 ft	5,200 ft
Outdoor/Covered	500	1,000	1,500	2,000
Outdoor/Uncovered	400	800	1,200	1,600
Through Surface Lot	350	700	1,050	1,400
Inside Parking Facility	300	600	900	1,200

Source: Walker Parking Consultants *Parking*, May/June 1994, Butcher, T. and Smith, M.

The land uses for Midtown each have their own recommended LOS and include:

- Office Visitors, LOS A or B
- Retail, LOS A or B
- Residential, LOS A
- Hotel, LOS A
- Employees, LOS B or C

Redevelopment on the Midtown site will take place in multiple phases; therefore, the construction of additional parking supply should also be built to accommodate new developments in phases. Locating the new parking supply on site based on the phasing of development should take into account the LOS walking distance factors.

PHASE I REDEVELOPMENT PARKING

Phase I redevelopment outlines mostly office, retail and hotel on the north and north-west portion of the site. Parking for those developments should be accommodated within close proximity such as walking distances for those land uses is recommended to be between 400' and 1,000'. Parking specifically for the hotel could be separated and incorporated directly into the building as the demand is relatively low at 125 spaces.

PHASE II REDEVELOPMENT PARKING

Phase II redevelopment includes a significant residential component. Residential development has its own unique characteristics as parking is generally reserved, meaning only the residents can use particular parking spaces. This is especially true for high end housing developments in urban CBD districts such as Midtown. Parking for the housing developments should be located relatively close (400'-500') to the actual units, if not incorporated into the design of the complex.

The proximate location of the proposed retail, restaurant, and hotel components will allow for parking to be accommodated in one large facility. A stand alone parking structure or mixed use facility could be constructed to accommodate the remaining parking needs on the south and south-east end of the Midtown site.

ON-SITE VEHICLE CIRCULATION

Facilitating vehicle circulation around the north end of the development for office, retail, and hotel vehicle trips will reduce the overall impact on traffic in and around the residential units. Separating the office and retail traffic flow from the residential units located on the south and south-east portion of the site will improve the level of service on the street. Additionally, it will reduce congestion in the "heart" of the developments. Since the Midtown site is approximately a five minute walk from end to end vehicle circulation is not a critical component as it is a relatively short walk.

PARKING FACILITY ENTRANCE & EXIT LOCATIONS

The retail developments on the north end of the site will generate a higher level of transient trips; therefore, entrances for parking should be placed around the northern perimeter of the site. This allows high vehicle traffic to remain outside of the core of development.

Placing entrances and exits for parking around the perimeter of the development allows easier access to the site and enables a lower level of traffic congestion in the center of the site.

Separate vehicle entrances and exits for the residential units on the south end of campus are recommended to separate other traffic uses from the housing developments.

It is our understanding that PAETEC intends to provide parking exclusively for the use of its employees. In the case of separating office tower parking from retail or other uses we recommend separating the vehicle entrances.

Hotel loading and unloading should be provided separate from other parking uses as generally vehicles using the hotel could block other traffic attempting to park for other uses.

PARKING FACILITY TYPES

The most effective way to concentrate a parking supply is through a parking structure. There are several variables and options to consider when selecting the type of structure. Options include the desired traffic flow (one way or two way), additional use within the structure (such as retail on the bottom level), the Level of Service (LOS) and height restrictions. Generally, the larger the potential site the greater the options for the design of the structure.

Structured parking will most likely provide the best option for massed parking to meet the demand that will be generated by the larger development densities. Structured parking will also be more cost effective as compared to underground parking. The facade of the structure can be designed to accommodate the existing architecture of the surrounding area of the city. Minimal surface parking lots could be considered to meet the demands of short term parking such as retail of office visitors.

MIXED USE PARKING GARAGE DEVELOPMENT

The thought of a parking structure in an urban environment typically evokes images of a building that is architecturally uninteresting and often unsightly when compared to historically significant buildings that exist in most downtown communities. Many of the older parking facilities that exist in urban settings are being replaced with a new breed of architecturally-inspired parking structures that enhance the surrounding land uses. Owners and designers are embracing the concept of seamlessly integrating parking with the dynamic elements of a viable mixed-use development despite the potential for an increase in overall project cost. The value is measured by the mixed-use projects' success as a whole which includes a strong absorption rate of office space, high levels of retail patronage, and thriving residential communities. Parking is an important piece of the mixed-use development plan that, if done well, can serve to help market and create a sense of place and architectural identity that is positive.

The proper placement of parking supply is a critical factor in its overall acceptance and use by different target groups. Therefore, the unique dynamics of the commercial development program for any mixed-use project must be considered early on when determining where or how the parking component should be integrated with the other land uses.

The following photographs highlight a sample of parking facilities designed by Walker that are intended to serve multiple land uses and architecturally enhance and integrate with the surrounding environments.

Photograph 1: Beach Street Parking Facility - California

Photograph 2: Downtown Cheyenne Parking Structure - Wyoming

Photograph 3: Rams Head Center Parking Facility – North Carolina

RAMS HEAD CENTER PARKING FACILITY

Photograph 4: Wheaton Place Parking Facility – Illinois

ZONING CODE REVIEW

Zoning is the means by which cities and other local governmental agencies ensure that development projects meet the community's standards. It has been termed "a preventative approach for achieving planned and orderly development. With respect to parking, zoning standards typically lay out formulas for determining how many parking spaces must be provided for specific types of land uses. Zoning also commonly deals with street right-of-way considerations, setbacks, building heights, floor area ratios and other measures of development density, traffic flow and access controls. Design standards are often included. The layout of parking, particularly the size of parking spaces and aisles, is frequently covered. However, many ordinances also deal with lighting requirements, surface treatments and landscaping standards; generally those provisions apply to surface parking lots, which are not covered by the building code that sets forth standards for the design of parking structures, both enclosed and open.

Walker reviewed Rochester's Zoning Code Article IX for the City Center District to determine if the proposed parking dynamics of the Midtown Redevelopment project comply with specified parking regulations. Based on Walker's understanding of the conceptual development plans and parking configuration, there are no significant zoning requirements that would impede parking development plans. In fact, according to Article IX, Section 120-65 there are no parking supply requirements for new commercial development in the CCD.

The following discussion provides a general overview of the approaches employed by many communities to establishing parking codes. It has long been recognized that parking is a key component of Transportation Demand Management (TDM), which is "a general term for strategies that result in more efficient use of transportation resources. When parking is oversupplied, it is likely to be undervalued. As estimated by Shoup, drivers park free for 99% of all automobile trips[1], which in turn means that in the vast majority of cases, drivers do not consider the cost of parking in their transportation decisions. In recent years, three separate but related planning and zoning approaches have focused attention on the negative impacts of a "more is better" philosophy of parking. The three approaches are Smart Growth, Transit-Oriented Development, and New Urbanism which are further described as follows:

[1] Donald C Shoup, *The High Cost of Free Parking* (Chicago, Ill.: American Planning Association, 2005, p. 621)

Smart Growth: According to the Smart Growth Network and the International City-County Management Association[2], "Smart Growth is development that serves the economy, community and the environment." Rather than abandon existing infrastructure in favor of the ever-spreading sprawl typical of development in the second half of the 20th century, Smart Growth encourages development and more importantly redevelopment in areas where infrastructure such as streets, utilities and public transportation already exist.

Transit-Oriented Development: According to the Transit Oriented Development Advocate website[3], transit-oriented development (TOD) is the land use and economic development version of TDM. The fundamental premise of TOD is to locate a mix of land uses around public transit stations in order to significantly reduce the occurrence of single occupant vehicle trips. Its focus is not merely to get people onto public transit, but rather to develop neighborhoods where external trips by auto are minimized. Projects should be located in higher density, mixed use, urban pedestrian districts with high quality transit service. External SOV trips can be reduced as much or more by people walking within a mixed use urban district as they can by using transit within and between urban centers.

New Urbanism: This is an approach to development (and zoning regulation thereof) that focuses on neighborhoods of mixed-uses with civic as well as residential and commercial uses, and outdoor public spaces. Land uses are not regulated solely by permitted uses in a district, but "by the type, mass and form of the buildings, their relationships to one another, and their role in shaping the public space of the street." While New Urbanism was initially used in new towns and other large-scale developments on vacant land, it is increasingly being used for development within otherwise built-out communities.

All three approaches fundamentally improve the efficient use of land, achieve affordable housing goals, reduce auto-dependence and enhance overall community livability. All three approaches rely heavily on the same things: "The concept includes mixed use, higher density, buildings at the sidewalk, less private and more public open space, smaller blocks, narrow streets with wider sidewalks, street trees and lights, lower parking ratios, shared parking, parking behind buildings, and on-street parallel parking."[4]

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[2] *Getting to Smart Growth: 100 Policies for Implementation.* http://www.smartgrowth.org/pdf/gettosg.pdf
[3] http://www.todadvocate.com/
[4] "What's TOD Got to Do With It". http://www.todadvocate.com/todlessons.htm (Quote specifically applied to TOD, but again, is applicable to all three.

Although many ordinances have had landscaping and other design requirements for many years, New Urbanism has spurred a more radical change in the philosophy of accommodating parking. New Urbanist zoning codes are form-based which have greater attention to streetscape and the public realm, and the role of individual buildings in shaping the public realm. It is important to remember that New Urbanism was initially a development philosophy for new "greenfield" developments, that is, those built from scratch on large parcels of undeveloped land. It is, however, modeled in many ways on the small community with a walkable downtown of many years ago.

One area of the City's Zoning Code for the CCD that may be examined further if surface parking lots are determined to be the most appropriate type of parking for the development is the landscaping requirements. We suggest that requirements for landscaping within parking lots are not necessarily an effective means of shielding and softening the view of the parking lots between the street and the building served. Internal landscaping also results in yet more waste of land, it is often difficult to maintain living plants in the parking environment, and dotting trees throughout a lot typically doesn't achieve enough shade of vehicles to meet the intention of requiring internal landscaping. While it is certainly desirable to try to save existing mature trees on a site, planting new ones is not particularly effective.

Rather, a separation and buffering of the vehicular and pedestrian environments by landscaping is a much more appropriate and effective strategy. It should be noted that landscaping and strategies masking surface lots and structures must also provide a sense of safety for users of parking facilities. The principals of Crime Prevention Through Environmental Design (CPTED) for example, suggest that masking of a surface lot by a 8' high solid masonry wall is counter-productive to making the parking acceptable to users. At the same time, enlivening the street frontage by improving pedestrian activity on sidewalks is strongly supported by CPTED.

LIMITING CONDITIONS

This report is subject to the following limiting conditions:

1. This report is based on assumptions outside the control of Walker Parking Consultants/Engineers, Inc. ("Walker") and/or our client. Therefore, Walker cannot guarantee the results.
2. The results and conclusions presented in this report may be dependent on future assumptions regarding the local, national, or international economy. These assumptions and resultant conclusions may be invalid in the event of war, terrorism, economic recession, rationing, or other events that may cause a significant change in economic conditions.
3. Walker assumes no responsibility for any events or circumstances that take place or change subsequent to the date of our field inspections.
4. Walker is not qualified to detect hazardous substances, has not considered such, and therefore urges the client to retain an expert in this field, if relevant to this study.
5. Sketches, photographs, maps and other exhibits included herein may not be of engineering quality or to a consistent scale, and should not be relied upon as such.
6. All information, estimates, and opinions obtained from parties not employed by Walker, are assumed to be accurate. We assume no liability resulting from information presented by the client or client's representatives, or received from third-party sources.
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Computer models that use and generate precise numbers generate some of the figures and conclusions presented in this report. The use of seemingly exact numbers is not intended to suggest a level of accuracy that may not exist. A reasonable margin of error may be assumed regarding most numerical conclusions. Conversely, some numbers are rounded and as a result some conclusions may be subject to small rounding errors.