Carl Walker Parking
Planning Engineering Restoration

STRATEGIC PARKING PLAN

Presented to:
City of Lynchburg

September 14, 2007

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EXECUTIVE SUMMARY

The City of Lynchburg engaged *Carl Walker, Inc.* to conduct a study of current parking conditions in Downtown Lynchburg and develop a strategic parking plan the assist the City in planning for its future parking needs. The basic charge to the study team was to:

- Assess current parking conditions and sufficiency.
- Examine the impact of future development plans.
- Assess prospective locations for the development of future parking capacity.

During the course of the data collection and analysis, the study team identified significant problems within the parking market that need to be addressed - some that go beyond the issue of parking capacity. Although outside the scope of this engagement, those issues have been addressed and specific recommendations have been developed to move Downtown Lynchburg in a new direction.

CURRENT CONDITIONS

Downtown Lynchburg has experienced an increase in development activity during the past several years and plans are in place for significant public improvements that center on dramatic new features and enhancements in the riverfront area. The Lynchburg Downtown and Riverfront Master Plan envisions a Riverfront Park that takes advantage of the natural features of the riverfront area. Upper and Lower Bluff Walks are planned at both the Jefferson Street level (Lower Bluff Walk) and the Jefferson Street level (Upper Bluff Walk) with overlooks that will offer dramatic views of the park and river beyond. The Master Plan also envisions significant residential development along Jefferson, positioned to take advantage of open views to the park.

Parking

New development, particularly in the area of the 9th Street access, has already created a greater sensitivity to parking availability. It has also created competition for parking resources between a growing residential sector and existing businesses that depend on that parking for their customers. A turnover analysis conducted as part of this study confirmed that 33% of on-street parkers occupied 2-hour spaces for more than 2 hours (including those who relocated to other nearby spaces) and that those parkers consumed 67% of the parking time used in occupied on-street spaces. This takes away

much of the most valuable parking space in the system – parking that should be available to downtown visitors and customers.

The parking system lacks important components that are needed to accommodate essential downtown parking needs.

- Although the City provides 2 hours of free on-street parking in all areas of the downtown, there are no options for parking stays longer than 2 hours.
- There is no paid all-day parking available for employees who do not need monthly contract parking.
- The major provider of monthly contract parking in private facilities does not offer monthly contracts to individuals, only to businesses. As a result, visitors, shoppers or diners who need to park for more than 2 hours have no options. Employees, whose employers do not provide employee parking, have few, if any options. Consequently, normal business visitor and shopper traffic depends solely on on-street parking and employees, with the limited options available to them, compete for that space.

These are unhealthy conditions, but they can be remedied.

Peak parking occupancy in the downtown area was 53% at the time of field surveys conducted for this study. This is not unusual, but would be considered at the lower end of the scale for active cities. The general perception is that parking is more difficult to find than this low occupancy level would indicate.

If only publicly accessible parking is considered, that perception is closer to reality. Much of the parking capacity in Downtown Lynchburg is simply not available to the general public. Hourly paid parking is non-existent. Another exception is an area centered on the Genworth Financial building where occupancy was measured at 80% on two blocks and more than 70% on four other nearby blocks.

Normally, an occupancy level of 70% would translate into a reasonable level of parking sufficiency. In Lynchburg, however, the lack of publicly accessible parking is compounded by the prevailing management practice of assigning monthly contract parking as individually reserved spaces. This practice further reduces the "effective capacity" that is actually available. When the person assigned to a reserved space is absent, it cannot be used by anyone else. It sits empty – a waste of resources.

KEY RECOMMENDATIONS

It is recommended that the City ...

1) Convert on-street parking in Downtown Lynchburg to paid parking with the installation of full-featured electronic parking meters to reduce employee parking in on-street spaces and to establish a financial incentive for the creation of private paid parking opportunities. The meters should include the following features:

   a) They should include a "complimentary" feature that allows parkers to park for a short time (e.g. 30 minutes) without charge – for quick stops, pick-ups and non-commercial deliveries.

   b) They should be able to accept pre-paid meter cards as a convenience for those who do business or shop downtown on a regular basis.

   c) They should be programmable to automatically allow extended parking times and different rates in the evening and on weekends.

   Meters would be phased in, beginning with Main Street and progressing outward in one-block increments as the program is put into place.

2) Discontinue the practice of offering individually reserved spaces at parking facilities controlled by the City and, in the case of the Midtown Garage, assign monthly contract parking by level only. This will allow more parkers to be accommodated and generate more revenue for the City.

3) Develop a plan to carry forward the other recommendations detailed in the supplementary report for the Midtown Garage related primarily to facility identification, maintenance and remedy of ADA obstacles.

4) Expand the role of the Lynchburg Parking Authority in providing both on-street and off-street parking to the public:

   a) Management of the on-street system should be placed with the Authority.

   b) On-street parking revenues should be used to purchase a handheld on-street parking management system to improve efficiency and provide more data than is available now.

c) The City should consider placing responsibility for all of the City's public parking facilities with the Authority. The Authority can take on direct operating responsibility or it can contract day-to-day operations of specific facilities to a professional parking management firm or other sub-contractor. If the Authority engages another organization to manage any of the City's facilities, under contract, the Authority should maintain ultimate control of operating policies, practices and rates, setting high standards of service.

d) The Authority should seek to identify privately owned parking lots or garages with surplus parking capacity and enter in management contracts with the owners to bring that excess capacity into the public market in order to provide additional hourly, daily and monthly parking as well as contract parking that is available to individuals.

(1) The Authority would not enter into leases that would involve any financial commitment to the owner. Instead, the Authority would provide the improvements and equipment to establish paid parking at the location and, after those set-up costs have been covered, revenues would be shared with the owner. Risk to the Authority and to the owner is minimal.

(2) To protect their interests and provide an incentive for participation, owners would retain control of their properties and the number of spaces available for public parking.

e) If the role of the Authority is expanded as proposed, and the Authority takes on direct operating responsibility, it should hire a manager dedicated to development and management of the Authority's parking program.

f) A parking availability webpage can be created as part of a Lynchburg Parking Authority website linked to the City of Lynchburg website. The webpage can be interactive, with several examples presently in operation in other cities, including Atlanta and Charlotte.

5) Look for opportunities to encourage or, if necessary, subsidize the development of excess parking capacity in new private developments that can be used to increase available public parking. The Lynchburg Parking Authority can provide management services for that public component of a private parking facility.

6) Establish parking minimums for new residential development in order to prevent the erosion of parking capacity needed to support the essential business core of Downtown Lynchburg.

7) Act as a consolidator of land and funds for development of larger, efficient parking facilities to serve the needs of multiple small developers who, individually, would not be able to create those facilities.

   a) Identify appropriate sites in areas of coming development that can be land-banked for future parking development – sites that are well positioned to serve the new development and have sufficient dimensions to accommodate an efficient design.

   b) Establish an "In Lieu" fee program to give residential developers the opportunity to have parking requirements waived in exchange for contributing to a common parking development fund administered by the City or the Lynchburg Parking Authority.

   c) Provide an opportunity for developers (without specific parking requirements per the zoning ordinance) to voluntarily secure parking in a shared facility in order to satisfy their needs and the requirements set by their lenders. This will encourage development of properties that cannot accommodate parking on-site.

8) Provide the information about parking capacities and parking availability that was developed as part of this study process to those involved in promoting downtown development. Assign staff to keep that information updated on a regular basis.

9) Initiate a full site feasibility analysis for development of a new 300-500 space (net gain) parking structure on the north half (or more) of the Human Resources block at 9th and Jefferson Streets. Follow a successful site feasibility analysis with a financial feasibility analysis as a precursor to a decision to proceed with design development.

   a) This location would provide new capacity needed for existing land uses and new developments expected in this area.

   b) It will also provide support for the new Riverfront developments, including visitor and retail traffic that will be developed along Jefferson Street.

10) Secure the property (current underutilized surface parking lot) located on the southwest corner of 12th and Commerce Streets and develop that property as a quality surface parking lot to serve the planned Bluff Walk development, the City Market, other nearby retail businesses and, with access provided by the proposed elevator to Jefferson Street, for visitors to the east section of the Riverfront Park area.

    a) Timing for development of this lot would depend on

        (1) development of Upper Bluff Walk

        (2) start of construction on the proposed public parking structure at 9th and Jefferson

        (3) demolition of the adjacent private parking garage

11) Review provisions for ADA parking throughout the city, focusing on City-owned facilities and on-street parking. Pay particular attention to obstructions and slopes that may use of the parking spaces difficult or unsafe. Engage the disabled community in evaluating existing parking provisions and solutions, particularly where a compromise of broad standards may provide a more practical and safer solution.

It is the opinion of the study team that these measures will begin important changes that are needed in Downtown Lynchburg as it moves forward with its plans to create a more attractive living and working environment and to enhance Downtown Lynchburg as a regional destination with unique riverfront attractions and unique shopping opportunities. Without these changes, future efforts by the City to provide sufficient parking support by focusing exclusively on capacity expansion will involve unnecessary capital expenditures with results that will still fall short of what is needed to provide convenient and efficient parking.

INTRODUCTION & BACKGROUND

The City of Lynchburg engaged *Carl Walker, Inc.* to conduct a study of current parking conditions in Downtown Lynchburg and develop a strategic parking plan the assist the City in planning for its future parking needs. The basic charge to the study team was to:

- Assess current parking conditions and sufficiency.
- Examine the impact of future development.
- Assess prospective locations for the development of future parking capacity.

As will be evident in reading this report, the study effort went well beyond the specified scope because of conditions that were recognized during the course of the study and the importance of those issues to the future of Lynchburg. Although the City is well-engaged in major development of its Downtown, particularly the Riverfront area, there are market conditions related to the overall parking system that need to be addressed if it is going to provide adequate support for those plans. There are elements of the parking market that are basically dysfunctional, with far reaching implications. This Strategic Plan addresses the need for additional parking development but, more importantly, it lays out specific recommendations for other actions that should be taken to remedy problems with the current market dynamics. If those problems are not addressed, Downtown Lynchburg will continue to suffer from real and perceived parking problems, even if physical capacity is expanded. The details of these market factors and their impact on development efforts will be addressed in substantial detail in this report.

LYNCHBURG NOW

The Lynchburg Downtown and Riverfront Master Plan completed in 2000 identified a number of significant public and non-profit initiatives aimed, primarily at revitalization of the lower Downtown and riverfront areas. Most of the projects identified in that Plan have come on line.

Several projects are centered on the segment of 9th Street that lies between Commerce Street the riverfront area.

- The J.W. Ould Building at 9th and Commerce Streets has been beautifully renovated and is now in use by the Human Resources Department.
- Amazement Square at 9th and Jefferson Streets is a significant attraction for school age children and families, a significant early step in creating a family-oriented district of parks and attractions along near the river.
- The historic Craddock Terry building at 9th and Jefferson Streets has been converted by private investors into the Riverviews Artists Gallery with art studios, display galleries and loft apartments.

Riverviews Gallery


Amazement Square

In addition to these projects which were enumerated in the 2000 Master Plan, additional developments are taking place along the riverfront, including the Depot Restaurant, a new restaurant scheduled to open on Jefferson Street in 2008 and redevelopment of the Pride of Virginia building.

At the west end of Main Street the Academy of Music and its support facilities have a new level of activity beyond the edge of the office core. At the other end of Main Street the Community Market has proven to be a successful draw and is growing in popularity. Specialty shops and other businesses located in the older buildings along that portion of Main Street have created a

consistent, interesting and pedestrian friendly environment between the Commerce Street intersection and 12th Street. Bluff Walk Center was nearing completion at the time of this study, adding the potential for regular conference activity and the introduction of new visitors to this unique area of Downtown Lynchburg.

Other significant developments have been realized in other areas of the downtown, with the most significant being the new Federal Courthouse located on Court Street in what can be identified as the government services district. The most dramatic changes, however, may be on the near horizon with ambitious plans for dramatic and creative improvements of the riverfront area, including Riverfront Park, a Bluff Walk at the Commerce Street elevation, and the addition of large residential developments along Jefferson Street.

One of the conditions recognized in the 2000 Plan was a lack of destination retail in the downtown area. This has not changed to any appreciable degree since that time, but the new level of activity and additional exposure that accompanies the new riverfront developments could bring some change to that pattern over the next few years.

A significant impact of recent development, particularly the increase in the number of downtown residents, is new competition for parking space. Current zoning does not include any specific parking requirements for developments in the downtown area, a policy that is not uncommon. Although most retail businesses and office buildings provide sufficient parking to meet their needs, some older buildings that are being converted to residential condominiums or apartments cannot accommodate parking on-site. This is creating new competition for parking, particularly for valuable daytime on-street parking, between these downtown residents and downtown businesses that depend on that convenient parking to serve their customers.

Growing pains are a good problem to have. Downtown Lynchburg is experiencing many of the growing pains that have been encountered by other cities as they have worked successfully to capitalize on the unique characteristics of an historic downtown that will attract more visitors and downtown residents.

This Strategic Parking Plan will attempt to provide guidance on actions that should be taken by the City to provide the parking support necessary to carrying the larger Master Plan forward.

PROCESS OVERVIEW

The study process included the following major components:

- A review of background information provided by the City
- A physical block-by-block inventory of parking capacity in Downtown Lynchburg.
- A survey of peak vehicle accumulation on a typical non-holiday weekday.
- A survey of vehicle turnover (length of stay) along key segments of on-street parking and in the Midtown Garage.
- Analysis of Land Use data provide by the City to evaluate parking sufficiency vs. land uses.
- Meetings with members of the City staff, including representatives of the Economic Development and Planning Departments.
- Meetings with various stakeholder groups representing downtown businesses, developers and downtown residents.
- An open public forum provided as an avenue for unrestricted community input.
- An examination of operations at the Midtown Garage.
- Integration and analysis of all information to produce this report which is an analysis of current conditions, a projection of future conditions, an analysis of market dynamics, an evaluation of current parking practices, and recommendations for improvements in the downtown parking system and steps to meet future parking needs.

CURRENT PARKING UTILIZATION

The following is a brief description of the process carried out in collecting information and the conclusions of the field work. Additional details about each component of the process are provided as those specific components of the process are presented.

BACKGROUND DATA

Information previously collected by the City was provided at the outset of the study for review. That information included the current Downtown and Riverfront Plan, maps and aerial photographs of the downtown area, previous parking system inventories, and the results of parking accumulation surveys that had been conducted earlier by City staff. Additional information was provided about recent development activities and a number of development projects that were either underway or anticipated.

PARKING SUPPLY INVENTORY

During the first on-site visit, the study team performed a full inventory of all parking within the study area, whether on-street or off-street, public or private. That information was subsequently entered in to a database and was the basis for inventory maps and forms that were used in the subsequent survey of parking occupancy.

Within the study area there are a total of 7,006 parking spaces. That total includes 1,036 on-street spaces and 5,970 spaces located in off-street parking lots or garages. The full inventory tables are included in the APPENDIX of this report. Summaries by analysis "zone" follow later in this section.

Off-Street Parking

The inventory of off-street parking included the following categories

- Regular (undesignated)
- Reserved Lots or spaces marked as "reserved" or for specific parkers/groups
- Monthly Lots or spaces identified as reserved for monthly contract parkers
- Visitor Spaces marked as "Visitor" parking
- Handicapped Spaces formally marked for handicapped parkers
- Loading Zone Spaces formally marked as loading spaces

- Residential — Parking areas or spaces identifiable as residential parking
- Timed — Specific time limit posted
- Motorcycle — Formal, marked motorcycle parking space
- Other — Any parking that fit no other category

Identification of the category was identified by signage or, in the case of the "Regular" category, the lack of any specific identification. Spaces in the "Residential" category were determined by observation or, in some cases, were identified by signage.

A relatively high percentage (26%) of the 5,970 off-street parking was identified as reserved parking. Another 11% was identified as monthly contract parking. More importantly, the vast majority of the remaining off-street spaces, although not specifically marked as reserved, private, or monthly parking is actually privately owned and cannot be considered parking that is available to the general public. There is a clear lack of off-street parking that is available to the general public for hourly or all-day parking. This is true throughout the study area and will be addressed in more detail later.

On-Street Parking

On-street spaces were grouped into the following categories:

- Marked — No posted time limit
- Marked — Timed (posted time limit
- Unmarked — Parking along curb faces without restrictive signage
- Unmarked — Timed (posted time limit)
- Reserved — Spaces controlled by "Reserved" signs
- Handicapped — Formally marked spaces for handicapped parkers
- Illegal — Used to record vehicles parked outside of legitimate parking spaces
- Loading Zone — Formally marked loading zones

In addition to spaces marked for special use (Reserved, Handicapped, Loading Zone) there are 309 marked spaces for general use. Only 16 of the marked general use spaces within the study area did not have posted time limits. Of the total 590 unmarked spaces, 231 had posted time limits, with no time limits on the remaining 359 spaces. Most unmarked spaces without time limits were located in peripheral areas away from the business core.

PARKING OCCUPANCY

Surveys of parking occupancy were conducted on Tuesday and Wednesday, May 8, 2007 and May 9, 2007. The surveys were conducted by a combination of study team members and City staff operating on foot and in vehicles. There were no material voids or inconsistencies in the data collected.

Total Occupancy

Total parking occupancy within the full study area was at 53% during the morning peak. However, occupancy exceeded 100% on some blocks as shown in FIGURE 1, which arranges all blocks in order of occupancy from highest to lowest.

FIGURE 2 shows the occupancy levels of each block within the study area, with color gradients to indicate the pattern of occupancy across the area. Dark red indicated the highest level of vehicle accumulation, progressing to the color colors, with light green representing blocks with the lowest percentage of occupied space. This occupancy map provides a good overview of parking conditions in Downtown Lynchburg as a whole. FIGURE 3 overlays that same information on an aerial photograph the study area. (Note: The photograph was taken before some of the more recent additions to Downtown were in place, including the new Federal Courthouse.)

As shown in FIGURE 2, occupancy was highest in the west area of Downtown Lynchburg between 5th and 9th Streets. Only one block, containing the Holiday Inn garage exceeded the 85% occupancy level, which is generally considered a "Full" condition. The next highest were two nearby blocks at 80% and 81%. Occupancies fell off at a steady rate as distance increased from that center of highest occupancy. One other block in the municipal area along Clay Street also had 81% occupancy, with much lower occupancy in nearby blocks.

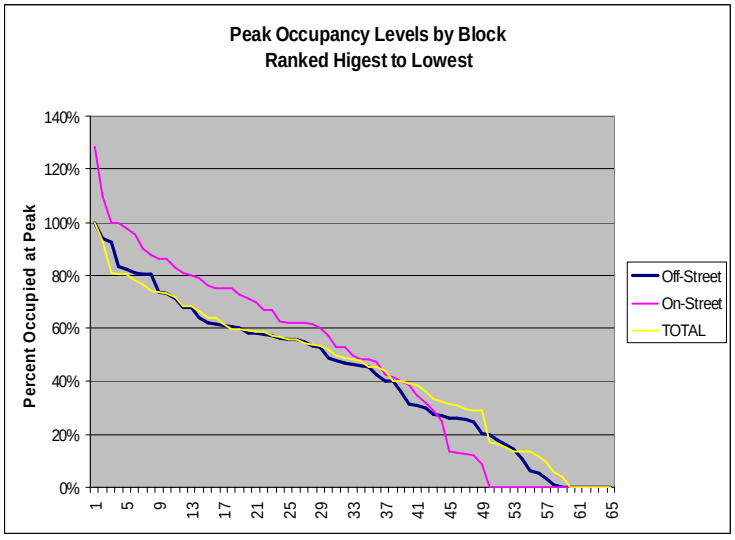


FIGURE 1

FIGURE 2

% Occupancy
TOTAL On-Street & Off-Street

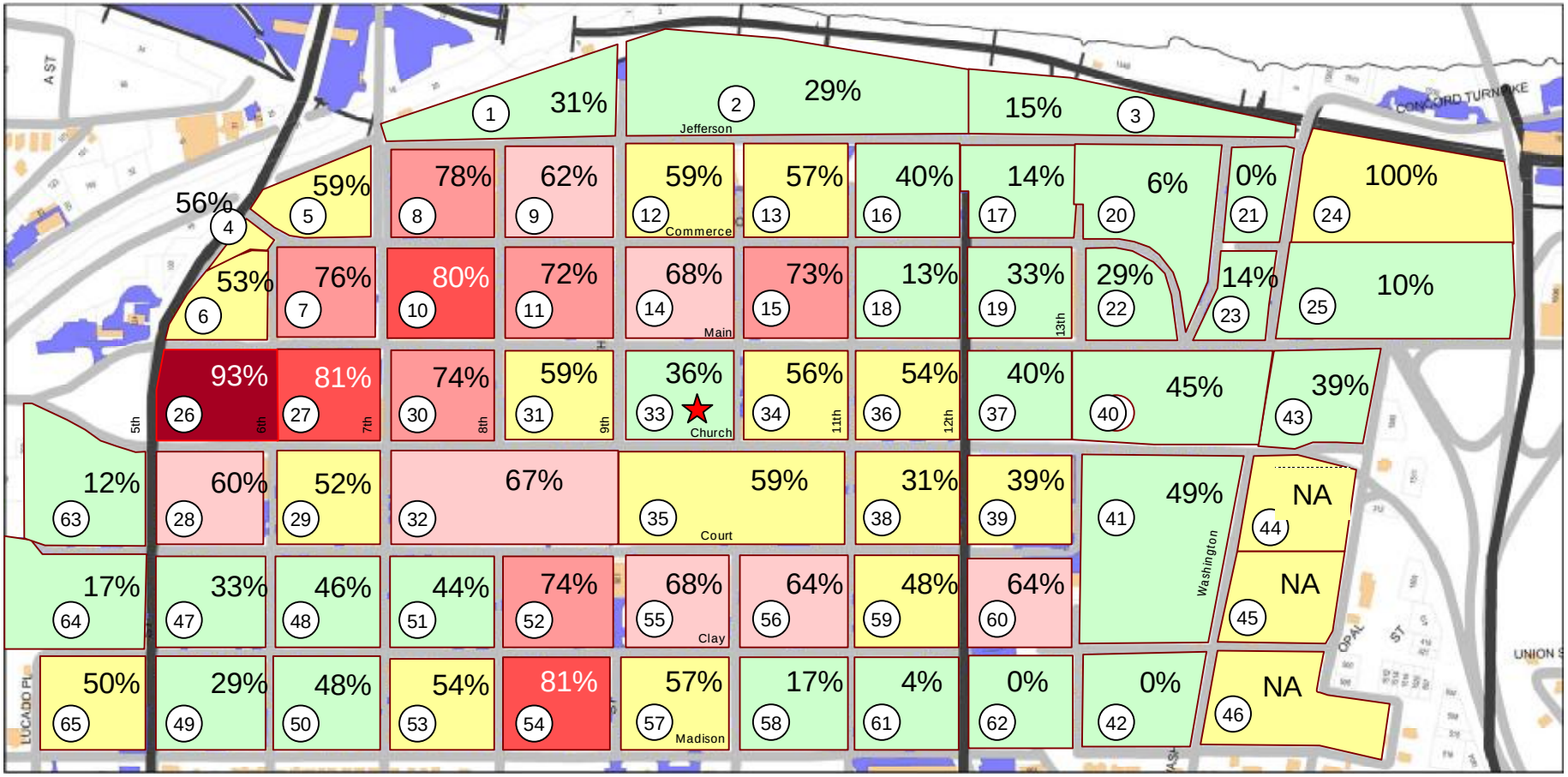


FIGURE 3

% Occupancy (On-Street and Off-Street)

Off-Street Occupancy

Off-street occupancy was surveyed during the point of peak vehicle accumulation late Tuesday morning (10 A.M. – 11:30 A.M.) and early afternoon (1 P.M. – 2:30 P.M.). The late morning count proved to be the period of highest accumulation which is normal.

The following is a summary of the occupancy results by category:

- Regular 45%
- Reserved 67%
- Monthly 67%
- Visitor 56%
- Handicapped 19%
- Loading Zone 62%
- Residential N/A
- Timed 54%
- Motorcycle 100%
- Other 0%

Total off-street occupancy within the full study area was at 53% (same as overall occupancy). This is nearly identical to the 54% overall occupancy reported in a 2005 update of land use and parking sufficiency provided by the City, indicating that there has been little change in parking patterns since that time.

Occupancy exceeded the 85% level, which is considered "full" or "nearly full", on only 3 of the 65 blocks in the study area. The graph in FIGURE 1 shows that there is a fairly uniform decrease in occupancy from that point, with 30 of the 65 blocks at less than 50% occupancy.

Occupancy in the Reserved and Monthly parking areas were the highest at 67% each. Although the occupancy level was higher in some of the reserved parking areas within the core, overall occupancy for reserved and monthly parking is fairly low. Part of the reason is the widespread practice of reserving both employee parking and monthly contract parking on an individual space basis rather than having reserved or monthly parkers share undesignated spaces in a reserved area. This will be addressed in more detail later in this report.

FIGURE 4

% Occupancy - Off-Street

On-Street Occupancy

On-Street occupancy was surveyed on Wednesday morning and afternoon in conjunction with surveys of vehicle turnover. The following is a summary of the results:

- Marked 100% (no time limit)
- Marked - timed 65%
- Unmarked 31%
- Unmarked – timed 78%
- Reserved 57%
- Handicapped 59%
- Illegal N/A
- Loading Zone 39%

All of the 16 marked spaces without time limits were occupied.

FIGURE 5 shows the level of on-street occupancy on a block-by-block basis with similar color-coding to visually indicate patterns of occupancy across the study area. The pattern in this graphic is very similar to the pattern of OFF-street occupancy in FIGURE 4.

FIGURE 5

% Occupancy - On-Street

Current Space Availability

FIGURES 6 - 8 provide a graphic view of space availability on a block-by-block basis for on-street parking, off-street parking and the total of both. This graphic actually provides a much better indication of parking sufficiency than the percent of space that is occupied. Percentages do not show whether 95% occupancy in a block leaves 2 spaces or 50 spaces. The summary of available spaces shows how much parking is available and where that capacity is located.

As expected, the three areas of lowest availability for on-street parking were along Main Street, Commerce Street and Court Street near the municipal complex. Surprisingly, there were 21 empty on-street spaces on block #33 where City Hall is located at the time of the survey. From observation, a higher percentage of on-street spaces are occupied in that block at various times of the day.

Available off-street spaces were fairly well distributed across the study area but only 6 blocks had more than 100 available spaces. Most of that available space was associated with the Midtown Garage, the Clay Street Garage, the large overflow surface lot across 5th Street to the west, and the gravel lot recently developed near the Depot development.

FIGURE 6

Available Spaces - On-Street

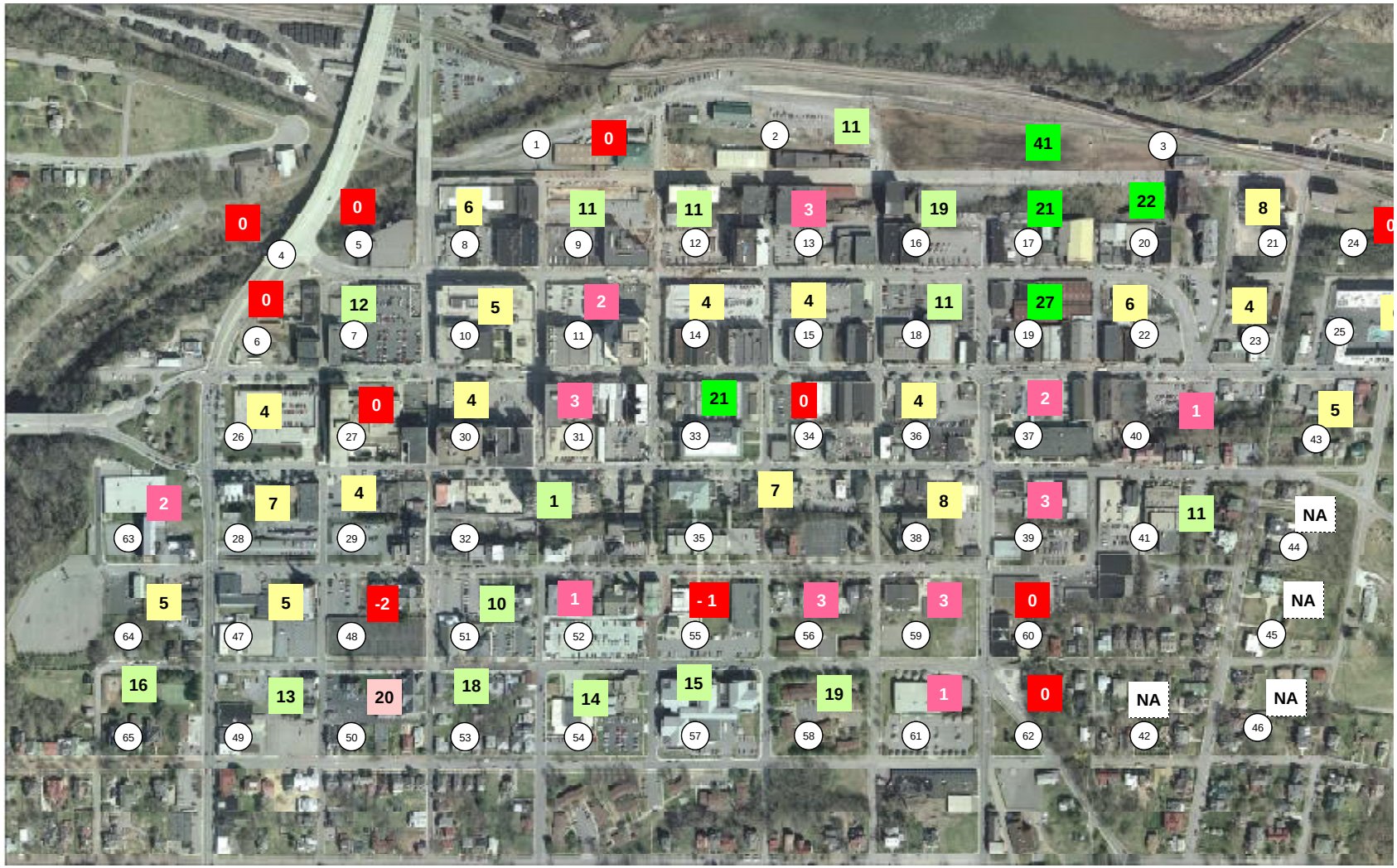


FIGURE 7

Available Spaces - Off-Street

FIGURE 8

TOTAL Available Spaces (On-Street and Off-Street)

ZONE ANALYSIS

To get a better grasp on patterns of parking occupancy and availability that relates to proximity and walking distances, the study area was divided into 15 Analysis Zones labeled "A" through "O." Although the zone analysis is useful, it should be viewed with care because the zone boundaries do not represent physical barriers that would limit the impact of parking demand across those boundaries. Examining parking demand and sufficiency by zones is a tool for compartmentalizing sufficiency, but it is not definitive. A significant parking deficit in one zone can be met by available capacity just across the street in another zone.

At the same time, a zone analysis helps take into account this very fluid parking demand dynamic by looking at sufficiency within a grouping of blocks where some blocks provide parking capacity for demand being generated in nearby blocks of that same zone.

FIGURE 9 shows the boundaries established for each analysis zone. In some cases, there is a significant elevation change within a zone that would make it impractical for some parking facilities within the zone to serve land uses at a different elevation in the same zone. However, the fact that many buildings have connections to both the lower and higher elevations, and the fact that the sharp elevation difference may dissipate at the edges of the zone, made it impractical to try to define the zones in ways other than street boundaries.

The tables that follow the maps (FIGURE 10) provide a recap of capacity, peak occupancy, % occupancy and available spaces by zone.

FIGURE 11 provides a color-coded summary of occupancy by zone. Zones D and H, which comprise the northwest quadrant of the downtown area had the highest overall occupancy rate at 72% and 71% respectively. Zones E and I, which represent most of the central area of Downtown, had occupancy levels of 58% and 53%.

FIGURE 9 ANALYSIS ZONES A - O

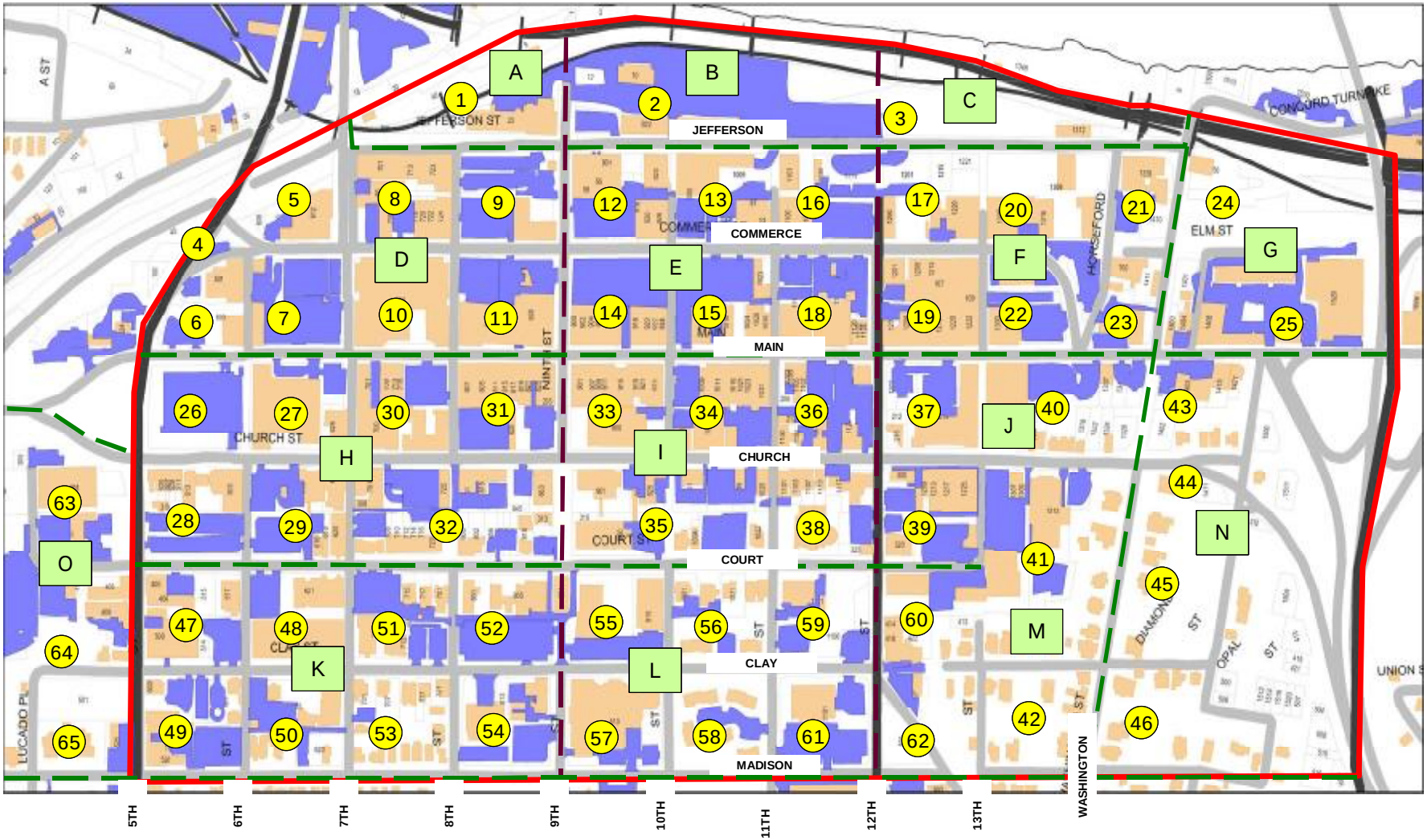


FIGURE 10 (a)

INVENTORY by ZONE

ZONE		Reg	Rsv	Mon	Vis	H/C	LZ	Resid.	Timed	Motor-Cycle	Other	OFF TOTAL	Mrkd	Mrkd Timed	Un-Mrkd	UnMkd Timed	Rsv	H/C	ILL	LZ	On TOTAL	Off / On TOTAL
A		105	0	0	0	0	0	0	0	0	0	105	0	0	5	0	0	0	0	3	8	113
B		163	0	0	0	0	2	0	0	0	0	165	0	0	22	0	0	0	0	0	22	187
C		90	0	0	0	6	0	0	0	0	0	96	0	0	45	0	0	0	0	0	45	141
D		238	608	0	13	15	0	0	0	0	0	874	0	45	40	18	0	0	0	1	104	978
E		303	38	599	5	8	0	0	81	0	0	1,034	0	45	31	56	0	2	0	14	148	1,182
F		111	5	0	0	7	3	0	49	0	0	175	0	35	41	21	0	0	0	12	109	284
G		102	0	0	0	0	0	0	0	0	0	102	0	0	6	0	0	0	0	0	6	108
H		717	161	54	25	20	5	0	37	0	0	1,019	0	79	10	30	0	6	0	9	134	1,153
I		370	80	0	0	14	4	0	7	0	0	475	0	61	0	32	0	7	0	7	107	582
J		101	55	0	0	3	2	0	3	0	0	164	8	28	0	2	0	2	0	2	42	206
K		380	466	0	2	25	0	0	0	1	0	874	0	0	94	31	8	4	0	2	139	1,013
L		195	104	0	0	8	5	0	7	0	0	319	0	0	29	41	20	5	0	0	95	414
M		173	4	0	0	0	0	0	0	0	0	177	8	0	11	0	0	1	0	1	21	198
N		26	0	0	0	0	0	0	0	0	0	26	0	0	5	0	0	0	0	0	5	31
O		351	5	0	0	9	0	0	0	0	0	365	0	0	20	0	28	0	0	3	51	416
TOTAL		**3,425**	**1,526**	**653**	**45**	**115**	**21**	**0**	**184**	**1**	**0**	**5,970**	**16**	**293**	**359**	**231**	**56**	**27**	**0**	**54**	**1,036**	**7,006**
		57%	26%	11%	1%	2%	0%	0%	3%	0%	0%	100%	2%	28%	35%	22%	5%	3%	0%	5%	100%	

OCCUPANCY by ZONE

ZONE		Reg	Rsv	Mon	Vis	H/C	LZ	Resid.	Timed	Motor-Cycle	Other	OFF TOTAL	Mrkd	Mrkd Timed	Un-Mrkd	UnMkd Timed	Rsv	H/C	ILL	LZ	On TOTAL	Off / On TOTAL
A		27	0	0	0	0	0	0	0	0	0	27	0	0	5	0	0	0	0	3	8	35
B		43	0	0	0	0	0	0	0	0	0	43	0	0	11	0	0	0	0	0	11	54
C		17	0	0	0	0	0	0	0	0	0	17	0	0	4	0	0	0	0	0	4	21
D		161	473	0	0	4	0	0	0	0	0	638	0	25	24	18	0	0	1	0	68	706
E		96	19	405	3	2	0	0	65	0	0	590	0	27	14	49	0	1	1	4	96	686
F		31	1	0	0	0	1	0	0	0	0	33	0	10	0	3	0	0	2	6	21	54
G		16	0	0	0	0	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	16
H		537	84	35	20	7	3	0	26	0	0	712	0	65	8	29	0	5	1	3	111	823
I		170	63	0	0	5	4	0	4	0	0	246	0	36	0	19	0	6	0	3	64	310
J		34	17	0	0	0	0	0	0	0	0	51	8	26	0	0	0	1	0	1	36	87
K		230	296	0	2	3	0	0	0	1	0	532	0	0	26	29	3	2	0	0	60	592
L		29	66	0	0	0	5	0	4	0	0	104	0	0	11	34	10	0	0	0	55	159
M		92	0	0	0	0	0	0	0	0	0	92	8	0	0	0	0	1	0	1	10	102
N		12	0	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	12
O		44	5	0	0	1	0	0	0	0	0	50	0	0	9	0	19	0	0	0	28	78
TOTAL		**1,539**	**1,024**	**440**	**25**	**22**	**13**	**0**	**99**	**1**	**0**	**3,163**	**16**	**189**	**112**	**181**	**32**	**16**	**5**	**21**	**572**	**3,735**

FIGURE 10 (b)

AVAILABLE SPACES by ZONE

ZONE		Reg	Rsv	Mon	Vis	H/C	LZ	Resid.	Timed	Motor-Cycle	Other	OFF TOTAL	Mrkd	Mrkd Timed	Un-Mrkd	UnMkd Timed	Rsv	H/C	ILL	LZ	On TOTAL	Off / On TOTAL
A		78	0	0	0	0	0	0	0	0	0	78	0	0	0	0	0	0	0	0	0	78
B		120	0	0	0	0	2	0	0	0	0	122	0	0	11	0	0	0	0	0	11	133
C		73	0	0	0	6	0	0	0	0	0	79	0	0	41	0	0	0	0	0	41	120
D		77	135	0	13	11	0	0	0	0	0	236	0	20	16	0	0	0	-1	1	36	272
E		207	19	194	2	6	0	0	16	0	0	444	0	18	17	7	0	1	-1	10	52	496
F		80	4	0	0	7	2	0	49	0	0	142	0	25	41	18	0	0	-2	6	88	230
G		86	0	0	0	0	0	0	0	0	0	86	0	0	6	0	0	0	0	0	6	92
H		180	77	19	5	13	2	0	11	0	0	307	0	14	2	1	0	1	-1	6	23	330
I		200	17	0	0	9	0	0	3	0	0	229	0	25	0	13	0	1	0	4	43	272
J		67	38	0	0	3	2	0	3	0	0	113	0	2	0	2	0	1	0	1	6	119
K		150	170	0	0	22	0	0	0	0	0	342	0	0	68	2	5	2	0	2	79	421
L		166	38	0	0	8	0	0	3	0	0	215	0	0	18	7	10	5	0	0	40	255
M		81	4	0	0	0	0	0	0	0	0	85	0	0	11	0	0	0	0	0	11	96
N		14	0	0	0	0	0	0	0	0	0	14	0	0	5	0	0	0	0	0	5	19
O		307	0	0	0	8	0	0	0	0	0	315	0	0	11	0	9	0	0	3	23	338
TOTAL		**1,886**	**502**	**213**	**20**	**93**	**8**	**0**	**85**	**0**	**0**	**2,807**	**0**	**104**	**247**	**50**	**24**	**11**	**-5**	**33**	**464**	**3,271**

PERCENT (%) OCCUPANCY by ZONE

ZONE		Reg	Rsv	Mon	Vis	H/C	LZ	Resid.	Timed	Motor-Cycle	Other	OFF TOTAL	Mrkd	Mrkd Timed	Un-Mrkd	UnMkd Timed	Rsv	H/C	ILL	LZ	On TOTAL	Off / On TOTAL
A		26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	26%	0%	0%	100%	0%	0%	0%	0%	100%	100%	31%
B		26%	0%	0%	0%	0%	0%	0%	0%	0%	0%	26%	0%	0%	50%	0%	0%	0%	0%	0%	50%	29%
C		19%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18%	0%	0%	9%	0%	0%	0%	0%	0%	9%	15%
D		68%	78%	0%	0%	27%	0%	0%	0%	0%	0%	73%	0%	56%	60%	100%	0%	0%	0%	0%	65%	72%
E		32%	50%	68%	60%	25%	0%	0%	80%	0%	0%	57%	0%	60%	45%	88%	0%	50%	0%	29%	65%	58%
F		28%	20%	0%	0%	0%	33%	0%	0%	0%	0%	19%	0%	29%	0%	14%	0%	0%	0%	50%	19%	19%
G		16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	16%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%
H		75%	52%	65%	80%	35%	60%	0%	70%	0%	0%	70%	0%	82%	80%	97%	0%	83%	0%	33%	83%	71%
I		46%	79%	0%	0%	36%	100%	0%	57%	0%	0%	52%	0%	59%	0%	59%	0%	86%	0%	43%	60%	53%
J		34%	31%	0%	0%	0%	0%	0%	0%	0%	0%	31%	100%	93%	0%	0%	0%	50%	0%	50%	86%	42%
K		61%	64%	0%	100%	12%	0%	0%	0%	100%	0%	61%	0%	0%	28%	94%	38%	50%	0%	0%	43%	58%
L		15%	63%	0%	0%	0%	100%	0%	57%	0%	0%	33%	0%	0%	38%	83%	50%	0%	0%	0%	58%	38%
M		53%	0%	0%	0%	0%	0%	0%	0%	0%	0%	52%	100%	0%	0%	0%	0%	100%	0%	100%	48%	52%
N		46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	46%	0%	0%	0%	0%	0%	0%	0%	0%	0%	39%
O		13%	100%	0%	0%	11%	0%	0%	0%	0%	0%	14%	0%	0%	45%	0%	68%	0%	0%	0%	55%	19%
TOTAL		**45%**	**67%**	**67%**	**56%**	**19%**	**62%**	**0%**	**54%**	**100%**	**0%**	**53%**	**100%**	**65%**	**31%**	**78%**	**57%**	**59%**	**0%**	**39%**	**55%**	**53%**

FIGURE 11

Inventory / Occupancy / Space Available - by ZONE

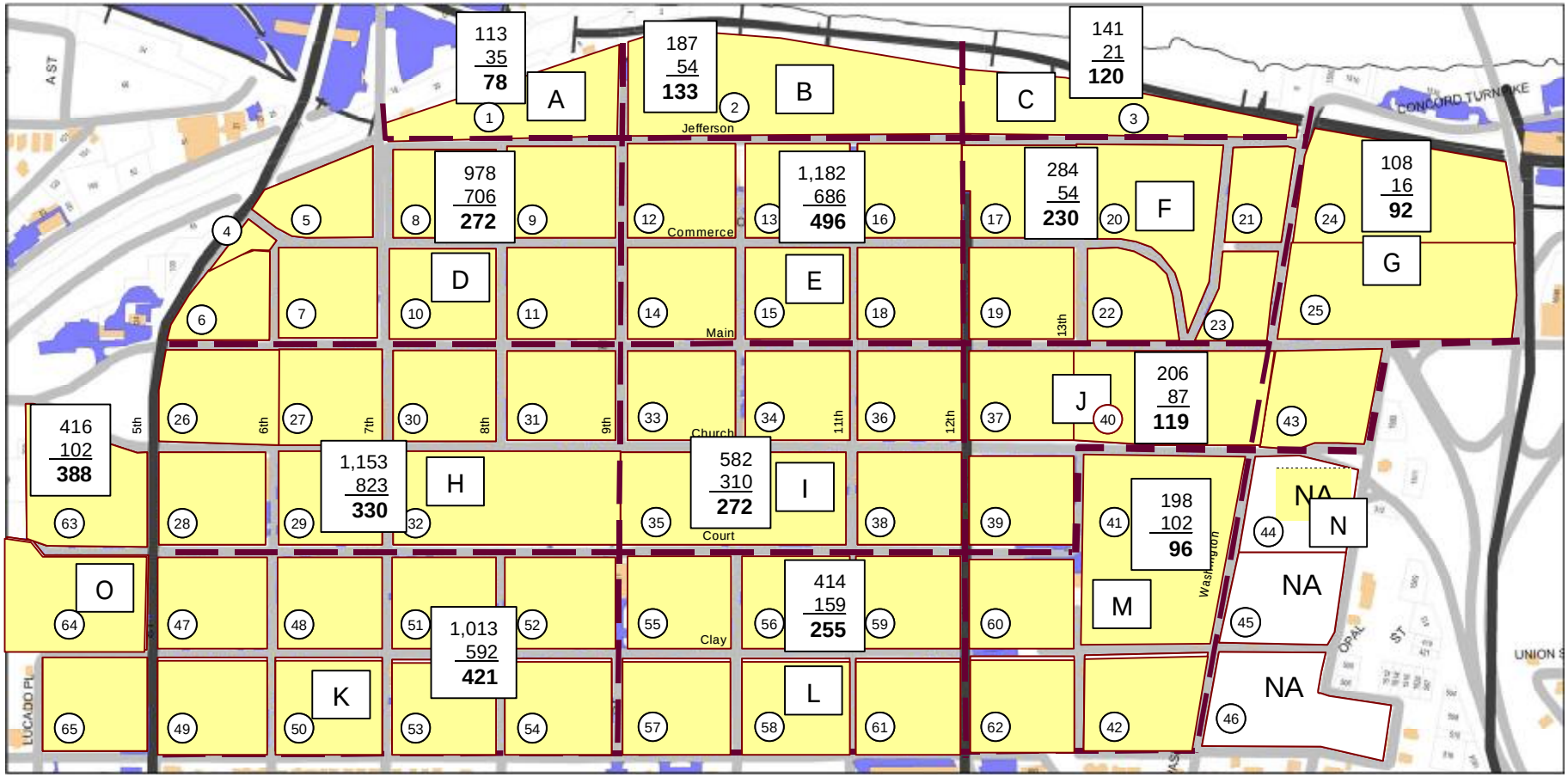
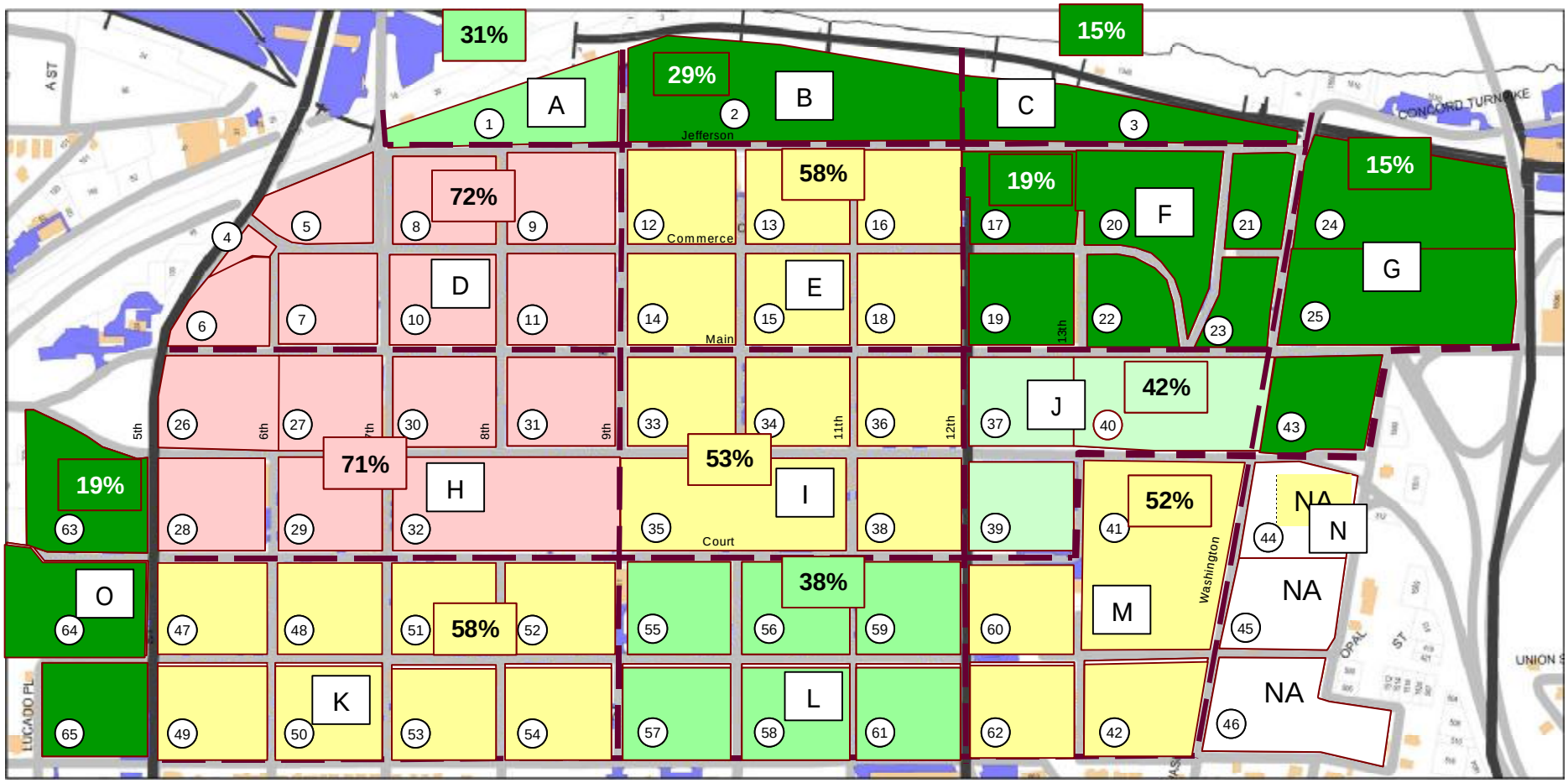


FIGURE 12

% Occupancy - by ZONE



TURNOVER SURVEY & ANALYSIS

A survey of license plate numbers was conducted on a significant portion of the downtown on-street parking spaces to determine utilization patterns. The areas covered in the survey included are shown on the map that follows (FIGURE 14):

Main Street	7th to Commerce Streets
Church Street	8th to 12th Streets
Commerce Street	9th to 12th Streets
9th Street	Church to Commerce Streets
10th Street	Commerce to Church Streets
12th Street	Commerce to Church Streets
Midtown Garage	Top Level

Hourly tours were conducted by City staff, recording the license plate numbers of vehicles parked in on-street spaces and in public spaces on the top level of the Midtown Garage. The purpose of the survey was to determine how long vehicles were parked in the same space and how long they remained in the same area if moved and re-parked elsewhere. This provided valuable information about how well short-term spaces are serving the purpose for which they were intended and how many of those spaces were occupied by area employees or residents - based on the length of stay in the space/area. Although the data is imperfect to the extent that employees may have moved to another space just outside of the coverage routes, the survey did produce results that are significant.

More than 300 spaces were included in the survey and 749 different vehicles were found parked in these spaces over the 10-hour coverage period. These vehicles consumed 1,539 hours of "parked time" with lengths of stay ranging from under 1 hour to 10 or more hours. The summary table provides two levels of analysis.

1) Parkers within the 2-Hour limit vs. parkers staying for longer than 2 hours.

   Of the 576 recorded stays, 67% (386) were 0-2 hours, consistent with the predominant time limit in the spaces surveyed. These parkers represent 33% of the total parking time consumed. The 190 parkers who stayed for more than 2 hours consumed 1,030 hours of curbside time, which represents 67% of the total time consumed.

2) Parkers staying for less than 5 hours vs. parkers staying for 5 hours or more.

Of the 576 recorded stays, 82% (475) were stays of 0-5 hours and represent 54% of the total time consumed. The 101 parkers who stayed for 5 or more hours consumed 715 hours, which represents 46% of the total time consumed.

This is not uncommon, particularly when enforcement of time limits is the only control, but it is not a desirable condition. It confirms the concerns expressed by the community that too much on-street parking in Downtown Lynchburg is taken by employees.

If the 1,030 hours consumed by parkers staying for longer than 2 hours were converted into additional 2-hour stays, the spaces they occupied could have accommodated an additional 515 parkers during the 10-hour survey period. Those parkers represent additional potential customers, additional business visitors, and a higher service level to the community.

It can be argued that spaces occupied by parkers staying longer than the posted time limit represent lost customers only when all spaces are occupied and those customers cannot find a place to park. That is true to a certain extent, but the reduction of parking availability and visibility creates a perception of scarce parking that is hard to dispel once it has gained broad acceptance. It is also true that some blocks may consistently have space while other nearby blocks are full.

FIGURE 13

Combined Distribution of Length of Stays INCLUDING VEHICLE RELOCATIONS

	1 Hour	2 Hours	3 Hours	4 Hours	5 Hours	6 Hours	7 Hours	8 Hours	9 Hours	10 Hours	TOTALS
% of Total Stays:	45.7%	21.4%	7.1%	8.3%	3.5%	3.0%	3.6%	4.0%	3.1%	0.3%	
Parker Stays:	263	123	41	48	20	17	21	23	18	2	576
Hours Consumed:	263	246	123	192	100	102	147	184	162	20	1,539
0-2 Hr. vs. 2+ Hr. Parkers	386	67%	190					33%			
Hours Consumed	509	33%	1,030					67%			
0-5 Hr. vs. 5+ Hr. Parkers	475	82%			101			18%			
Hours Consumed	824	54%			715			46%			


Turnover Survey
Coverage Routes
Commerce Street
Midtown
Garage
Main Street
Church Street
7th
8th
9th
10th
11th
12th
13th

FIGURE 14

LAND USE ANALYSIS

The City provided a database of land use information for 49 of the 65 blocks within the study area. That original database placed each land use into one of 6 specific categories and one "Other" category:

- Office
- Retail
- Service
- Residential
- Unfinished Basement
- Vacant
- Other

The square footage of each land use category was recorded by block and included all levels of multi-story buildings. It also included identified vacant space within existing buildings.

In order to relate that information in a more meaningful way to parking demand, the study team reorganized the available data using a category set that was more appropriate for the parking analysis. In some parking studies, land uses are divided into even smaller categories including, for example, a separate category for restaurants. The number of categories that could be consistently applied was limited by the information provided in the City's database. But, it should be noted that the detail contained in the database is significantly more detailed, in terms of its potential use as an economic development tool, than has been found in most other cities.

The land use database developed by the City should be maintained and regularly updated to preserve and take advantage of an excellent base of information. That revised database, with the expanded land use categories, is provided as a deliverable with this report. The additional categories in this revised version may prove useful in other applications.

Except for the Residential and Hotel categories, all land uses were measured by square footage.

- Office
- Retail
- Service
- Medical Office
- Government
- Warehouse
- Residential (measured by units)
- Community Center / Recreational Club
- Hotel (measured by rooms)
- Church
- Museum
- Day Care
- Unfinished Basement / Storage
- Vacant
- Other

The land use information was used to develop a model of parking demand generation in the study area by first applying expected parking demand ratios to each of the land use categories. Those ratios were then adjusted until the computed parking demand approximated the actual vehicle counts found during the field surveys conducted for this study. The results of the calibration brought the computed demand within 1% of actual demand. Some disparity between the computed demand and actual demand appeared in the four zones (D, E, H and I) where there is the highest concentration of floor area and population. This is a normal result because these are the areas where parking demand is most likely to be met to some extent in adjacent zones. However, when zones D and E were combined the disparity was reduced to 4% with the actual demand at 96% of the computed demand. Similarly, when Zones H and I were combined, actual demand was within 6% of computed demand.

FIGURE 15

	TOTAL Computed Demand	TOTAL Actual Demand	TOTAL Capacity
A	7	35	113
B	18	54	187
C	10	21	141
D	**832**	**706**	978
E	**381**	**686**	1,182
F	124	54	284
G	151	28	139
H	**778**	**823**	1,153
I	**408**	**310**	582
J	122	87	206
	2,832	**2,804**	**4,965**
		99%	

	Computed	Actual
D & E	1,213	1,392
		115%
H & I	1,186	1,133
		96%

D-E-H-I	2,399	2,525
		105%

The resulting "calibrated" ratios were lower than those normally found in similar cities with limited transit use. However, the ratios are similar to the "calibrated" ratios found in the Parking Analysis portion of the Sasaki "Lynchburg Downtown & Riverfront Master Plan" developed in 1999-2000. This reflects a lower than normal density within the downtown buildings.

This moderate disparity is heightened by the fact that the largest demand generator in the area, Genworth FInancial, is generating a parking demand that is higher than the overall downtown ratio and closer to what would be expected in a city of similar size. The Genworth Financial building is approximately 350,000 square feet and, based on information provided by Genworth staff, has a daytime population of approximately 966 people. The firm is presently providing 819 parking spaces for

those employees both on-site and in nearby parking facilities. Most of those spaces are, however, reserved on an individual basis, and parking for a significant number of Genworth employees is provided in nearby private lots. So, it is difficult to assess what the actual daytime demand may be in terms of the total number of spaces actually occupied. Making a reasonable assumption that 15% of those spaces may be empty during the peak hour on a normal workday, 696 spaces would be occupied. This would result in a parking demand ratio of approximately 2.0 spaces per 1,000 SF of office space.

(696 vehicles / 350,000 SF / 1,000 = 1.99 vehicles per 1,000 SF)

This is a reasonable expectation, but still higher than the 1.5 spaces per 1,000 SF computed for the downtown as a whole. This difference becomes apparent when the 1.5 ratio is applied to office space in Zone D. The result is that actual demand is 15% higher than this computed demand. The higher demand generated by Genworth pushes actual demand in that zone higher than what is found for office space in the rest of the study area.


Genworth Financial

FIGURE 16 - Land Use and Parking Demand Analysis by Zone
(only those zones where complete land use information was available)

SUMMARY OF LAND USE DISTRIBUTION

	Retail	Service	Office	Bsmt. Store	Parking	Gov't	Church	Mus.	Vacant	Whse.	L. Ind.	School	Hotel Rooms	MOB	Rec. Ctr.	Day Care	Other	Res. Units	Spcl. Res.	TOTAL
A	0	0	0	7,200	0	0	0	26,400	18,572	0	0	0	0	0	0	0	0	0	0	**44,972**
B	13,702	0	6,000	700	0	0	0	0	31,560	0	0	0	0	0	0	0	0	0	0	**51,252**
C	0	0	8,050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**8,050**
D	22,943	2,000	603,956	19,100	0	0	0	0	189,907	12,169	12,700	34,212	0	0	0	0	0	2	0	**889,323**
E	51,448	42,014	179,340	61,680	0	0	0	0	336,044	68,620	6,000	5,760	0	10,724	0	0	0	42	0	**768,255**
F	85,939	52,677	3,000	28,035	7,600	0	0	8,908	153,532	21,824	0	800	0	0	0	0	0	10	0	**345,466**
G	1,000	14,598	6,673	4,800	0	0	0	0	67,110	0	0	0	126	0	0	0	0	6	0	**145,503**
H	16,506	54,613	274,648	42,432	16,875	0	1,830	0	164,086	0	0	0	243	0	26,532	0	0	38	163	**894,608**
I	58,806	40,323	107,677	46,258	14,346	126,827	28,343	0	138,241	28,740	3,460	0	0	0	0	0	0	16	0	**576,587**
J	28,044	13,064	13,626	31,780	0	0	0	0	56,784	0	0	46,539	0	0	0	3,222	0	48	23	**250,491**
TOTALS:	**278,388**	**219,289**	**1,202,970**	**241,985**	**38,821**	**126,827**	**30,173**	**35,308**	**1,155,836**	**131,353**	**22,160**	**87,311**	**369**	**10,724**	**26,532**	**3,222**	**0**	**162**	**186**	**3,974,507**

COMPUTED PARKING DEMAND (Based on Land Use Distribution)

	Retail	Service	Office	Bsmt. Store	Parking	Gov't	Church	Mus.	Vacant	Whse.	L. Ind.	School	Hotel	MOB	Rec. Ctr.	Day Care	Other	Res. Units	Spcl. Res.	TOTAL
Ratio >>	**0.75**	**0.75**	**1.30**	**0.00**	**0.00**	**1.30**	**0.25**	**0.25**	**0.00**	**0.25**	**0.50**	**0.50**	**1.00**	**2.00**	**2.00**	**2.00**		**0.80**	**0.25**	
A	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
B	10	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**18**
C	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**10**
D	17	2	785	0	0	0	0	0	0	3	6	17	0	0	0	0	0	2	0	**832**
E	39	32	233	0	0	0	0	0	0	17	3	3	0	21	0	0	0	34	0	**381**
F	64	40	4	0	0	0	0	2	0	5	0	0	0	0	0	0	0	8	0	**124**
G	1	11	9	0	0	0	0	0	0	0	0	0	126	0	0	0	0	5	0	**151**
H	12	41	357	0	0	0	0	0	0	0	0	0	243	0	53	0	0	30	41	**778**
I	44	30	140	0	0	165	7	0	0	7	2	0	0	0	0	0	0	13	0	**408**
J	21	10	18	0	0	0	0	0	0	0	0	23	0	0	0	6	0	38	6	**122**
Demand:	**209**	**164**	**1,564**	**0**	**0**	**165**	**8**	**9**	**0**	**33**	**11**	**44**	**369**	**21**	**53**	**6**	**0**	**130**	**47**	**2,832**

Comparison of Demand to Capacity by Zone

After calibration of the parking ratios, the resulting pattern of parking demand was compared to available capacity to better identify the level of parking support provided for the land uses in each zone. The results of that comparison were plotted on the map on the following page.

The table in FIGURE 17 below provides a summary comparison of demand (based on land use computations) vs. available capacity by zone and by zone groupings. Zone G, which is the location of the Travelodge hotel actually shows the most unfavorable ratio of demand to capacity, but that is based on a normal occupancy level for a hotel. Actual occupancy at the Travelodge is lower than normal. Zone D, has the highest ratio of the active areas with computed demand reaching 85% of available capacity. A ratio of 85% or higher is normally considered a "FULL" condition because a certain amount of empty space is necessary for a system to function. Zones H and I in the core area were nearly as high at 67% and 70%. That is considered reasonably high, but still functional if all of the parking is available for use.

When the most active zones are paired with another zone on the same general elevation, D-E, F-G, and H-I, the difference in ratios across the core is moderated with the H-I couplet being the highest at 68%.

FIGURE 17

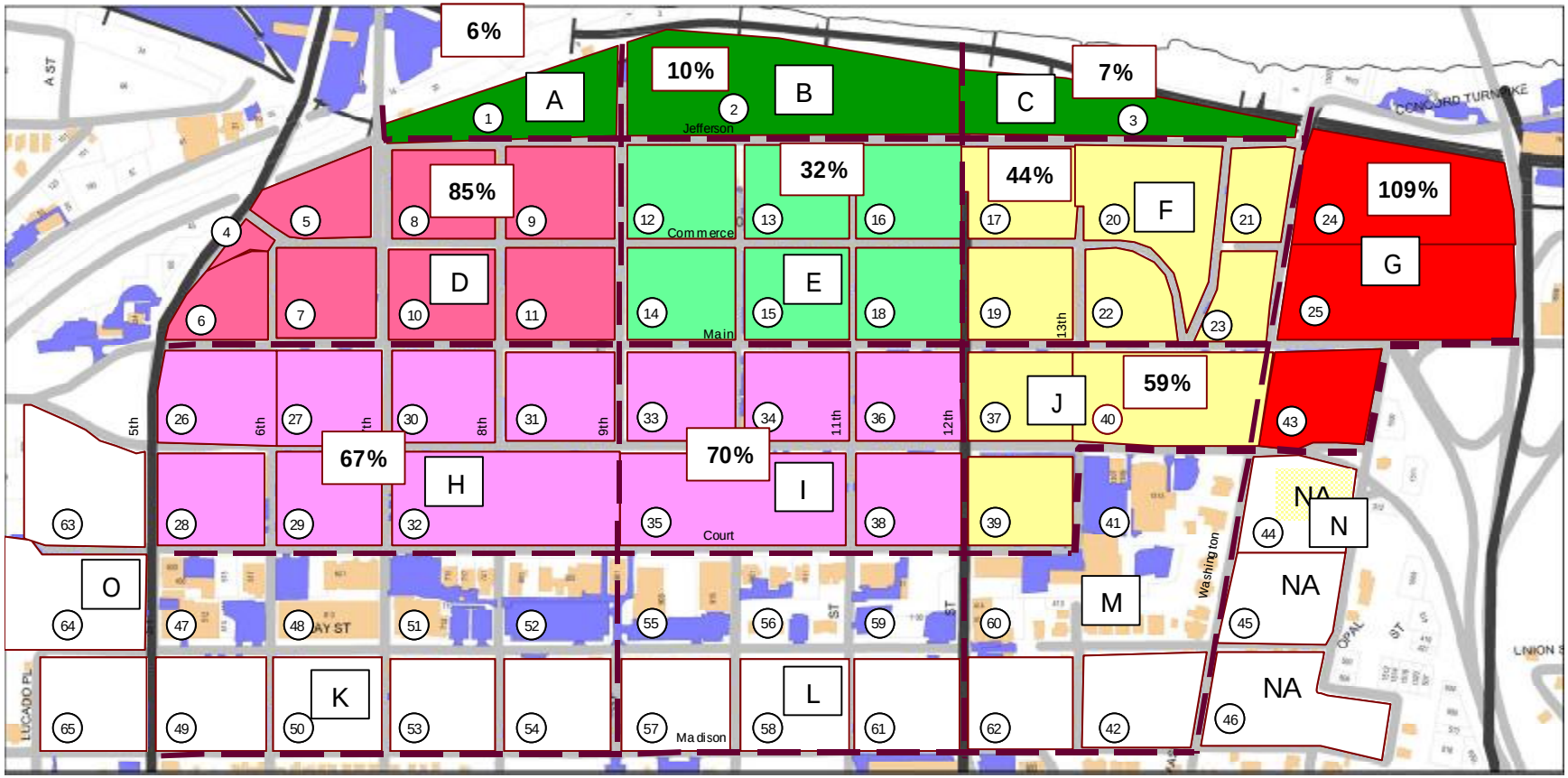
	TOTAL Computed Demand	TOTAL Computed Capacity	Sufficiency Ratio (a) by Zone	Sufficiency Ratio (a) by Grouped Zones
A	7	113	6%	**A + B + C**
B	18	187	10%	**8%**
C	10	141	7%	
D	**832**	**978**	**85%**	**D + E**
E	**381**	**1,182**	**32%**	**56%**
F	124	284	44%	**F + G**
G	151	139	109%	**65%**
H	**778**	**1,153**	**67%**	**H + I**
I	**408**	**582**	**70%**	**68%**
J	122	206	59%	
	2,832	4,965	57%	

(a) Sufficiency Ratio = Demand as a % of Available Capacity

FIGURE 18

The percentage of available capacity in each zone that is consumed by demand generated by the land uses in that zone.

Sufficiency vs. Land Use - by ZONE



NOTE: The high consumption ratio (109%) in Zone G is much higher than the actual demand found during the occupancy surveys due to the fact that such a large portion of the parking in that zone consists of the parking lots serving the Travelodge - parking with very low occupancy at the time of the field surveys.

PREPARING FOR FUTURE PARKING NEEDS

A normal part of developing parking strategies is to examine prospective development activity on both a near-term and long-term basis. The study team reviewed the YR-2000 Lynchburg Downtown & Riverfront Plan and other information that was provided by the City and City sources related to both the City's vision for downtown development and potential projects that may be part of that vision.

PARKING ANALYSIS Addendum to Lynchburg Downtown & Riverfront Master Plan

A parking analysis, submitted as an addendum to the Lynchburg Downtown & Riverfront Master Plan, was provided by the City as input to this review. That addendum included a land use analysis aimed at determining actual parking demand ratios for Downtown Lynchburg that could be used in projecting future parking needs. That is a logical, standard approach normally used in parking studies. From parking occupancy data developed at the time, actual parking ratios in Downtown Lynchburg were found to be lower than expected by industry standards. That is the same result found during our analysis, although it was expected based on previous experience with similar downtowns.

Despite recognizing this difference, the Plan used higher, more "typical" parking ratios that were defined as "Standard/Future" to project future parking needs. *Carl Walker* often applies different parking demand ratios to future development than found under the existing conditions because new developments typically result in higher densities - either because of a change in use of a converted building or because of more efficient use of space in newer buildings. The higher densities generate higher parking demand.

The problem found with the methodology applied in the Downtown & Riverfront Plan is that the higher "future" demand rates were applied uniformly not only to future buildings but to existing buildings as well in projecting future parking demand. That difference in methodology is significant. Although densities may also increase in re-use buildings, they are not normally as high as would be found in new construction projects.

- The Plan analysis identified 1,897,300 SF of total future office space in its forecast. Although a ratio of 1.5 spaces per 1,000 SF of office space was found to be the current condition, the higher "standard/future" rate of 2.0 spaces per 1,000 SF was applied to all of that projected office space. The resulting application of this higher rate to the 1,285,060 SF of existing office space identified in their analysis results in a potential overstatement of future parking demand of up to

642 spaces. The application of this higher rate to all office space in the future project is at least partially justified by an expectation that population densities will increase as the overall demand for existing office space increases over time.

- A ratio of 1.0 spaces per 1,000 SF of retail space was found in the existing market, but a much higher rate of 3.0 was applied to that 356,105 SF of existing retail space in the future projections, potentially overstating retail demand by 712 spaces. The analysis made a very valid point that existing retail in the downtown area was, and is, serving primarily downtown "walk over" traffic and that, if future retail development plans are successful, more traffic will be drawn to those businesses from outside the Downtown area. That is a legitimate point when looking at very long term needs, but is probably too optimistic in making decisions for making major near-term investments in new parking facilities.

- A ratio of 3.0 spaces per 1,000 SF was applied to all future government land uses, totaling 266,689 SF despite the fact that 253,025 SF of that total consists of existing government buildings which the analysis estimated at a demand of only 2.5 spaces per 1,000 SF. This would result in a potential 126 space overstatement of demand.

The total potential overstatement of demand from this methodology is just under 1,500 spaces. Although some of the factors affecting the density and draw of existing office and retail space are likely to increase the parking demand ratios generated by these two land use classifications, the potential overstatement should be recognized rather than ignored.

FUTURE VISION & DEVELOPMENT ACTIVITY

Information about pending and expected development activity was provided from several sources during the course of the study in varying levels of detail. A number of projects that were in the planning stages when the City's Master Plan 2000 was produced have become realities and the long range vision presented in that Plan shows a remake of the entire Riverfront that is truly impressive.

Although it is clear that some of the initiatives to add improvements and new development along the river exposure are likely to move forward, specific details and start dates for potential projects were limited. Some projects are already underway along Jefferson Street, but it appears that other potential projects, including several converted use projects that may include new residential units, are still in the talking stages. That level of uncertainty is often the case during development of an overall

Master Plan, but it imposes limits on the development of a specific action plan for strategic parking development that may involve significant capital investment.

That said, this report will identify a number of factors related to future parking sufficiency that take into account both current conditions, the Master Plan, other City initiatives and expected development patterns. Those factors do give direction to strategies for meeting future parking needs, including preferred locations for future parking facilities.

Recognizing the City's greatest natural asset, the Downtown and Riverfront Development Plan envisions the creation of a formal park and play area along the banks of the James River, including a number of specific attractions designed to add interest and draw visitors from the region. It is clear that the Riverfront area is intended to take advantage of existing natural features to create an interesting space for families and downtown residents to share. The shear size of the Riverfront area between Jefferson Street and the river provides extensive open space and opportunities for more intimate experiences with the natural surroundings.

Downtown Lynchburg

The Plan envisions a backdrop of multi-story residential developments on the south side of Jefferson Street, all with an unobstructed view to the park area and the river beyond. Because of the significant elevation difference between Jefferson Street and the bluff that lies behind these potential residential buildings, they could be several stories high without significantly impacting redevelopment opportunities along the top of the bluff.

Major improvements are planned along the top of the bluff itself, taking advantage of the elevation to provide broad views of the river area for the public. These include phased development of a Bluff Walk along the top of the bluff that will consist of walking paths, pedestrian bridges, overlooks and an elevator to Jefferson Street below. The Bluff Walk will certainly provide opportunities for retail development along Commerce Street that are not yet identified.

Pedestrian connections between the bluff and Main Street (and beyond) are part of the program, with 9th Street improvements already in place and similar improvements planned along 12th Street. The 12th Street improvements include an overlook and possibly an elevator on the bluff at the north end of the street.

The existing improved connection that 9th Street provides to the Riverfront area has already stimulated some new development in the form of new and planned restaurants that will serve visitors to Riverfront Park and Amazement Square.

Growth in the Residential Sector

A major part of the vision for Downtown Lynchburg, and the Riverfront area in particular, is significant growth in the downtown resident population. Apart from the substantial enhancements of the riverfront and Riverfront Park, the principal feature of the Riverfront plan is the addition of multi-story residential units that take advantages of the spectacular view across the park area, to the river. In addition, there are several potential conversion projects in that area that would create new residential units in existing buildings that are either vacant or underutilized.

Parking Implications

Both of these welcome developments create challenges in terms of parking. Downtown residents and business owners have already recognized the direct conflict between business needs and the needs of new downtown residents in the use of scarce on-street parking. Residents feel entitled to on-street

parking because they see it as the only parking available to them while businesses see critical on-street customer parking being taken up by residents during the day. This is a conflict that will increase in intensity if intended growth in both the retail and residential sectors is realized. It will be come even more intense as the result of residential conversions, where no on-site parking is available, and if the retail segment begins drawing more customers from the broader Lynchburg area.

In some communities, new residential developments are not required to provide sufficient parking to meet expected needs. They are generally larger cities that have well-developed public transportation systems that include subways or extensive trolley networks. Very high parking rates and a real scarcity of parking has forced many residents in those cities to forego automobile ownership – not by choice, but by necessity. Another important factor is that those cities, over time, have created an urban living environment that satisfies most basic living and leisure needs. Distances and travel times to leisure attractions outside the city are significant and downtown residents tend to look to well-developed neighborhood parks and open spaces to satisfy their leisure needs. These conditions reduce the need for automobile ownership and travel.

Because of its setting in the foothills of the Appalachian Mountains, the area around Lynchburg offers a tremendous variety of leisure activities within a short distance from the city itself. This is a strong positive in attracting new residents, but it also supports the assumption that automobile ownership will continued to be the norm, even for downtown residents. The planned riverfront enhancements will certainly reduce that need for residents living along Jefferson Street, but there is simply too much to see and do in the immediate region for residents to limit themselves. In addition, it may be some time before Downtown Lynchburg offers a normal range of staples needed to support a residential community. It will be an even longer time before the downtown area provides a range of options for meeting those basic needs. At this point in the history of the city, it would not seem prudent for Lynchburg to risk creating a reason for people not to live in the Downtown area by making it difficult for them to access and enjoy the attractions outside of the city, or to limit their access to the variety of staple items available in nearby suburban shopping areas. Provisions for parking will be an assumed part of residential development for some time to come.

Another issue is the impact of a growing "live-work" environment where downtown residents live within walking distance of their place of employment. A true live-work environment clearly reduces overall parking demand, but the fact is that the reduction is reflected in a reduction of parking demand at the workplace rather than the place of residence. Residents leave their vehicles at their residence

and walk (or take public transportation) to their workplace. It is revealing to logically consider the potential parking demand impact of downtown workers moving to downtown residences from the suburbs. Of the eight scenarios shown below, only one results in a reduction of downtown parking demand. Only one other has a neutral impact and the rest result in an increase in downtown parking demand.

	CHANGE in Number of Parking Spaces Needed >>>>	Downtown Residence Spaces	Downtown Workplace Spaces	Total Downtown Spaces
	Worker lives in suburbs and drives to downtown workplace		1	baseline
1	Worker moves downtown and gives up car	0	-1	-1
2	Worker moves downtown and brings 1 car but walks to work or takes public transportation	+1	-1	0
3	Worker brings 1 car but still drives across downtown to work	+1	0	+1
4	Worker family has 2 cars but worker walks	+2	-1	+1
5	Worker family has 2 cars and worker still drives to work	+2	0	+2
6	Worker moves downtown but works outside downtown	+1	0	+1
7	Worker family has 2 cars but work outside downtown	+2	0	+2
8	Family has 2 workers who drive across downtown to work	+2	0	+2

Zoning Requirements

Currently, the Downtown area is exempt from zoning requirements related to the provision of on-site parking for all land use categories. This is not uncommon. Developers are free to determine how much parking to provide based on their own parking needs as dictated by their funding sources. Lenders normally consider parking as an important element in evaluating the feasibility of any new development. In some cases, their requirements exceed what is mandated by zoning and, sometimes, the lender calls for more parking than is allowed by ordinances that restrict parking.

There are two categories of residential development that must be examined separately in terms of parking requirements - new structures and conversions.

- New Residential Buildings - The City should consider requiring new residential developments (new buildings) to provide sufficient on-site parking to meet the needs of its residents. Mixed-use developments should be required to meet at least the needs of its residential component with

dedicated parking. This may not become an issue for the new residential projects that spring up along Jefferson Street because it is more likely that they will be "higher end" developments with residents that will demand convenient on-site parking. The average demand ratio for those projects is likely to be between 1.5 and 1.75 spaces per unit.

- Conversions - The larger challenge is providing parking for residents living in conversion properties that may have no parking on-site. These residents cannot expect to be accommodated on the street during normal business hours and, in areas where a significant nightlife may develop, during evening dining hours. The City should consider requirements that these conversion properties secure sufficient parking for their residents either on-site, at nearby private parking facilities, or by contributing to the development of public parking facilities where their residents can have parking privileges. Contribution to a shared parking facility can be accomplished through an In-Lieu Fees program or purchase of condominium shares of parking facilities. The parking ratio can be lower than that for new residential buildings because "loft" type units tend to have fewer adult residents per unit and a lower parking demand.

  These new requirements will certainly affect the financial feasibility of prospective conversion projects without sufficient space for on-site parking. But, unless the City is willing to subsidize this sector with publicly funded residential parking, the cumulative long-range effect can be to choke future growth by allowing residential parking shortages and, more importantly, parking use conflicts, to develop. Issuing on-street residential permits that allow a limited number of current downtown residents to use on-street parking during the day may be tempting as a short-term solution, but it is not a policy that can be sustained if downtown growth continues.

  Presently, it is the opinion of the study team that most, if not all, of the demand from residential conversions presently being considered can be accommodated in existing nearby off-street private parking lots if that parking is made available. That is the case, in part, because those prospective developments are dispersed across the area. Securing sufficient parking will become more difficult for developers if conversion activity begins concentrating in particular nodes of the Downtown area and absorbs the available surplus. It will also become more difficult as current parking capacity is lost as sites for new development. The City or the Lynchburg Parking Authority, acting on behalf of the City, can play an important role as a consolidator of both land and funding to develop parking that would be difficult or impossible for individual small developers to do on their own.

PLANS FOR MEETING FUTURE PARKING NEEDS

Normally, at this point in developing the Strategic Plan, attention would be turned to the need for development of additional parking capacity, if needed. However, in the case of Lynchburg, leaping forward to those conclusions would not be prudent without first taking a close look at current market conditions and how some of those conditions should be addressed as part of meeting future parking needs. Recommendations regarding future parking development will follow that discussion.

MARKET CONDITIONS IN LYNCHBURG - PARKING

Field observations, discussions with City staff and input from the community at large during the course of on-site research has revealed conditions in the parking system that, in several ways, make it dysfunctional. This is not due do any gross mismanagement of the system. Rather, it is the result of the way that the city and the operation of its parking resources, both public and private, have evolved over the past 20 years. In the simplest terms, the system has regressed.

For the purpose of this discussion, the term parking "system" refers to all of the parking resources serving Downtown Lynchburg, both public and private. All of these parking resources must be considered because they all contribute in meeting the overall parking needs of businesses, government offices and residents located in the downtown area. Although the City may have direct influence over some of those resources and full control over on-street parking, most parking capacity is privately owned, satisfying most of the parking demand generated by downtown activity.

The balance of this section will deal with market dynamics that impact Downtown parking and, in turn, the overall health of the Downtown community. Issues related to specific parking system components will be addressed first, followed by a discussion of how these components fit together and relate in an overall parking system.

Parking System Components

There are seven (7) major components that make up the typical downtown parking system:

1) Short-term on-street parking (available to the general public)
2) Short-term off-street parking (available to the general public)
3) All Day off-street parking (available to the general public)
4) Monthly contract parking (available to the general public)
5) Reserved employee parking (for employees of a specific business)
6) Reserved customer parking (for customers of a specific business)
7) Residential parking

These seven components, whether publicly or privately controlled, satisfy most parking needs for those living, working, shopping or doing business downtown. The more important point, however, is the fact that the first four are necessary elements of a successful downtown parking system. The last three, privately reserved employee parking, reserved customer parking, and residential parking, are typical

components but the first four are essential components. No parking system can properly support the health and growth of its downtown without either the municipality or private interests satisfactorily meeting those first four universal needs.

The general public needs access to short-term (0-2 hours) parking, but they also need access to parking for dining, shopping or business stops that take longer than 2 hours.

Downtown employees need access to all-day parking, without having to move their cars in and out of on-street spaces to avoid ticketing. The parking system should provide a mix of both daily (purchased by the day) and monthly contract parking for downtown employees in facilities not owned or controlled by their employer.

Not all employers have the means or willingness to provide parking for their employees. Some expect their employees to make their own choice between paying to park downtown and taking mass transit. Requiring employees to make that choice ultimately reduces the overall demand for parking. Continued employer-paid or employer-subsidized parking works to keep parking demand high which is detrimental when, over time, dramatic increases in downtown density create congestion and reduce efficiency. However, realistic alternatives must be available to workers if they are expected to make that choice. Options in Lynchburg are, at this point, limited and not likely to change substantially over the next decade.

On-Street Parking

On-Street (curbside) parking is the most valuable asset in the City's parking system. It is the most convenient parking for nearly everyone working or doing business downtown. The exception is an "attached" parking structure that provides a fully weather protected route from workplace to parking space, but that advantage comes into play only when weather is an issue.

The availability of ample on-street parking in small to mid-size downtown areas is critical to downtown

businesses. In order to compete with suburban businesses, the Downtown must make sure that as many potential customers as possible can find convenient on-street parking. The consistent availability of on-street parking can make a dramatic difference in the time needed for trips downtown to shop, eat or do other business. It is particularly important in drawing people from outside the Downtown area who have limited time for their trip and have alternatives elsewhere. Downtown restaurants and cafes, for example, can attract more lunchtime business from outside Downtown or from across Downtown if convenient parking is consistently available nearby. In most cases, particularly for those restaurants located along Main Street, that means on-street parking. Restaurants that have the potential for drawing from outside Downtown can do so if those potential customers are able to travel to the location, park quickly in an on-street space, eat, and return to their workplace within a reasonable time. If the search for parking and the walking distance between the parking space and the restaurant adds too much time to the process, those potential customers are more likely to find somewhere else to eat. If on-street parking is not available, convenient and visible off-street surface lots can meet the same needs although on-street parking is preferred by most drivers.

The same principle holds true for other types of businesses that compete with suburban locations for customers. Whether the business is a law firm, accounting firm, or retail business, the ability of clients and customers to make short trips can have a dramatic impact on the success of those businesses by expanding their market reach beyond the daytime population of downtown residents and workers.

The most important change that must take place in Lynchburg is the change in both policy and culture related to on-street parking in the central business district. Presently, much of that parking is taken up by employees and, in some cases, by downtown residents. Although most parking in the Downtown area is subject to time limits, it is common knowledge that Downtown workers park in curbside spaces. Most complaints about parking from those Downtown workers is that they have to move their cars once or twice during the day in order to avoid a parking ticket. Likewise, employers complain about the fact that they have to allow their employees to leave work to move their cars.

The growing number of Downtown residents also complain that it is terribly inconvenient to have to move their vehicles throughout the day in order to avoid being ticketed. Some of those residents live and work in the same location, leaving their cars parked on the street virtually 24 hours a day.

On-street parking must be reserved for short-term visitors and business customers. Employees must find parking in off-street parking facilities. Downtown residents must find off-street parking during normal

business hours. Although on-street parking privileges for Downtown residents is an accepted practice in many cities, those privileges are normally limited to downtown districts that are predominantly residential (sometimes with first-floor retail) or to areas on the periphery of the active business core.

One of the questions that arose during discussions with stakeholders, and during the public forum held on May 10th, was "Where will employees find parking if they don't park on the street?" That issue will be addressed in more detail later, but the real question should be "Who is better able to find off-street parking alternatives, employees who work Downtown every day and know the area, or customers and visitors who are not as familiar with Downtown parking options?"

In summary form, here are the basic principles governing the proper management of on-street parking:

1) On-street parking must be dedicated to downtown visitors, clients and customers.

2) Employees and Downtown residents must not park in on-street spaces during normal business hours. Streets that are predominantly residential streets, typically at the periphery of the downtown core, are the exception.

3) On-street spaces should be managed with time limits or pricing (parking meters) to ensure that they are used only for short-term stays.

4) The goal in managing on-street parking is to provide convenient parking for the greatest number of potential parkers while applying time limits that reasonably accommodate the needs of downtown customers and visitors.

Identified Shortcomings in the Current Parking System

There are several conditions that can be, and should be, categorized as "shortcomings" in the operation of the current downtown parking system and the support that it should be providing to the community.

Lack of Alternative Short-Term Off-Street Parking

A component conspicuously missing from the parking mix in Lynchburg is ample short-term off-street parking that is not designated for specific businesses. Someone coming downtown for a meeting that will last more than two hours literally has no parking option unless the specific business provides it. On-street parking is limited to two hours and there are no off-street parking lots or garages providing

hourly parking for stays longer than two hours. This leaves a huge gap in meeting normal downtown parking needs, results in unnecessary ticketing for overstays and undermines efforts to build activity in Downtown Lynchburg.

Lynchburg is "trying" to function as if it is a suburban environment, with each business providing its own parking. This is inconsistent with a downtown environment. It results in both inefficiencies and frustration. Inefficiencies result from unused parking capacity that is reserved for specific businesses and not available for use by visitors or employees of other businesses. Frustration results from the difficulty for downtown visitors and customers to find a convenient parking space.

Old signs and abandoned parking attendant booths at a number of parking locations across downtown Lynchburg are evidence that daily and hourly paid parking was available in the past. The practice of offering paid hourly parking at private off-street facilities apparently dissipated when parking meters were removed from downtown on-street spaces and "free" curbside spaces became the preferred parking for employees. Many cities across the country removed their parking meters in the 70's when downtown businesses left for the suburbs. In recent years the trend has reversed, with cities adding or returning parking meters to their curbside parking spaces in an effort to restore the intended use of on-street parking for customers and visitors.

Lack of Alternative All-Day Off-Street Parking

Another component of the system that is conspicuously absent is all-day off-street parking for downtown employees, particularly all-day parking that is available on a "daily" basis. This is an important component of a healthy parking system. Without it, employees who have legitimate reasons for not renting a parking space on a monthly basis, have to resort to on-street parking. That works against the goals of the system as a whole.

Lack of Off-Street Monthly Contract Parking for Individuals

Conversations with downtown employers indicates that there is a reluctance, if not a consistent policy, on the part of those controlling private parking capacity downtown to sell monthly contract parking to individuals. Monthly parking contracts are made available to downtown businesses, but not to individuals.

The apparent reason for this reluctance is the additional effort involved in selling monthly permits to individuals and the enforcement effort required when permits are not renewed on time. There is also no question that the administrative effort is reduced when the number of monthly parking accounts is reduced, with each account representing multiple parkers. But, this practice leaves a significant parking need unmet. It affects those downtown employees unable to find suitable off-street parking and affects the downtown visitors whose on-street spaces are taken up by those employees.

Lack of Financial Incentives to Make Parking Available

The private side of the market is not presently satisfying some essential parking needs because there is a lack of financial incentive and financial opportunity to do so. The present condition is a self-perpetuating "vicious cycle".

- Because on-street parking is provided without charge, there is little reason for employees to seek parking in off-street lots or garages. The only incentive is the inconvenience of having to move their cars twice a day to avoid ticketing.
- If parking is available at curbside for "free", it is much more difficult for private paid lots to attract parkers.
- Because there is little financial incentive for property owners to offer off-street paid parking (low rates and free on-street competition), it is not available.
- Because good off-street options are not available to employees, they continue to park on the street.

Under normal market dynamics, the cost of metered on-street parking, combined with the inconvenience of having to feed the meter throughout the day (if allowed), provides an incentive for downtown employees to seek off-street parking. They are willing to pay a reasonable rate because they are already paying at the meters. As a result, off-street paid parking is made available by property owners with excess space on their lots or with lots that can be dedicated to paid public parking for profit.

Normally, the first step in developing off-street paid parking takes place when property owners begin filling excess capacity on existing lots with monthly contract parkers. Monthly contract parking is already part of the Lynchburg market, but with some shortcomings in terms of availability to individual

parkers (as discussed earlier). Often this occurs when those property owners are initially approached by nearby businesses or employees about renting parking spaces on their lot.

The next step is the creation of hourly and/or daily parking, using simple collection methods such as a manual coin box. This type of service is provided in order to fill additional parking spaces or to generate a higher rate of return per space. If priced correctly, hourly parking generates the highest income per space, followed by all-day parkers and then by monthly contract parkers. In well-developed parking markets, parking operators "fine tune" the profitability of their parking locations by filling as many spaces as possible with short-term parkers, then filling as much of the remaining space with all-day parkers, then filling the rest with monthly contract parkers. There are other nuances such as the use of "Early Bird Specials" and charging an appropriate premium for individually reserved spaces, but recognizing the ranking of these three basic profitability categories is core strategy for good commercial parking management.

In Lynchburg, this natural evolution in the development of downtown parking options is stalled because the foundational incentive is missing - paid on-street parking.

Some cities continue to function without on-street meters by vigorous enforcement of time limits and high parking fines that "up the ante" for those willing to risk a ticket on a routine basis. However, those cities provide other workable parking alternatives for downtown employees and visitors who need to park for longer than allowed in the on-street spaces. Lynchburg does not really provide those alternatives as a municipality or through the private sector.

The general consensus within the parking profession is that systems in small and medium sized cities that charge for off-street parking but allow free on-street parking are working against the market dynamics that naturally work to meet the various parking needs of those communities. Parking is a study in human behavior and a system that ignores how people respond to market conditions created by price and convenience factors is a system that is "swimming upstream." Progress toward meeting the community's parking needs is slowed.

A properly balanced paid parking system that includes both paid on-street and paid off-street options is characterized by rates for the on-street parking that are higher than those available at the off-street alternatives. This relationship provides additional incentive for parkers to seek off-street options when staying for more than a very short time. As stated earlier, the critical issue to downtown customers and visitors is not the cost of on-street parking but the consistent availability of convenient on-street parking.

This has been born out in a number of surveys designed to identify reasons why people do not come downtown. The lack of convenient parking is typically ranked high as a concern and the cost of convenient parking is seldom considered a significant issue in comparison.

Parking Management Practices

Effective management of existing parking resources is always viewed as the first step in meeting any parking needs. That is always the most cost effective and normally the quickest route to improvements in the parking system on both the public and private sides. The Lynchburg Parking Authority was very expressed concern about whether present practices related to the assignment of reserved monthly spaces in both public and private facilities was the best policy for conditions in Lynchburg. The Authority is aware that standard practice is to minimize individually reserved parking spaces in order to increase utilization of available space.

Effective management of a monthly parking program, particularly for a public facility, should have two goals:

1) High utilization of available parking capacity
2) Maximized revenue

Discontinuation of individually reserved parking spaces is a step toward both goals. It recognizes and takes advantage of a factor referred to in the industry as the "diversity factor."

Diversity Factor

Typically, some percentage of monthly permit parkers are absent from the parking facility on any given day. The percentage of assigned parkers who are typically absent is called the "diversity factor" and can range from 5% to more than 30%.

The percentage varies according to the specific mix of parkers. Facilities with a large number of attorneys and sales representatives tend to have a high rate of daily vacancies, particularly from mid-morning to mid-afternoon. Those parkers are out into other areas of the city frequently during the day or may be gone for long periods on most days. Facilities occupied primarily by hourly office staff typically have a lower vacancy rate because those employees tend to remain at their downtown work location for the full day.

Parking facility managers take advantage of the diversity factor by regularly monitoring the rate of parking absenteeism and selling additional monthly permits to fill that empty space. The manager must, of course, make certain that the oversell never results in a full facility and that subscribed parkers can always find a space in their assigned facility. That requires continuous monitoring of empty space and occasional changes in the number of monthly permits sold. When properly managed, the oversell of monthly permits allows maximum utilization of available parking capacity and provides additional revenue.

Monthly parking in Lynchburg, whether in facilities owned by the City or operated by the principal parking management firm operating in Lynchburg, is sold primarily as individually reserved spaces. This has become the expectation of parkers purchasing monthly parking, but it has reduced the service level of the overall parking system, created artificial parking shortages and reduced revenue potential.

Needed Changes in the Parking System

Discontinuation of Individually Reserved Parking Spaces

The City should set the pace for the market by discontinuing the practice of offering individually reserved parking spaces in its facilities. Monthly permits should entitle the holders to park in a designated "Monthly Parkers Only" area that is controlled by prominent signage. Those permit parkers would park in any open space within the designated parking area for monthly parkers.

It would be preferable to have physical gate controls to protect these areas from encroachment, but the present "reserved by space" system is controlled only by signage and operates reasonably well. There is a slightly higher risk of unauthorized parkers using a shared permit area because people are more reluctant to park in a space that they know is reserved for a specific individual who is more likely to have the violator towed. They feel that the risk is somewhat lower when they are likely to be towed only if the entire area fills or as the result of enforcement patrols.

Because of the physical configuration of the Midtown Garage the decision to discontinue individually reserved spaces is not as clear cut as it normally is with "typical" garage designs. In the Midtown Garage, transition from level to level is in only one direction, from the top down, because of the single-lane, one-way ramping system. In order for permit parkers to be assured of finding a space by searching the entire garage, they would have to enter from the top level and search downward. A parker who prefers a space on Level 3 may pass open spaces on the Level 4 only to find no spaces

open on Levels 1, 2 or 3. In that case the parker must exit the garage and circle back to the upper level entrance to return to the available spaces on Level 4. In reality, the permit parkers using the garage will develop patterns based on the daily usage patterns in the garage. Those parkers will learn, for example, that the preferred levels are full by 9:30 A.M. and that the only level where empty spaces can be found at 11:00 A.M. is Level 4. They will adjust their search patterns accordingly.

Local parking operators should be strongly encouraged to discontinue the practice of reserving individual spaces except in exceptional cases. By failing to do so, the parking facilities under their control are, by default, underutilized - depriving the community of needed parking capacity. As long as this practice is widespread, the community will have legitimate complaints about a scarcity of parking when there is plenty of unused capacity in the market on any given day. Because the practice is so entrenched, it will be important that the community be educated through deliberate and effective publicity efforts by the City and the Lynchburg Parking Authority about the cost to the community of continuing with this way of doing business.

Employee Parking

As already mentioned, many Downtown employees in Lynchburg routinely park in on-street spaces. If the management policy for on-street parking is going to be changed to more effectively discourage this practice, alternative off-street parking must be available to accommodate those employees. This parking must be provided in facilities owned or leased by the employer, in private parking facilities, or in public parking facilities that allow all-day parking and monthly parking contracts.

The degree to which Downtown businesses provide or subsidize parking for their employees varies by city and by employer. In cities supported by strong mass transit systems that provide convenient and efficient connections with surrounding residential areas, there is less pressure on employers to provide parking near the Downtown workplace. In many cases employers in those cities provide a limited amount of parking near the workplace and offer financial support for mass transit use. This is a possibility in Lynchburg, but is less of a factor than it is in cities with well-developed subway or elevated rail systems.

Downtown businesses must make a choice between providing parking for their employees, meeting some of their needs through mass transit support, or simply leaving their employees to find their own parking wherever they can. Those businesses do have some responsibility, however, to recognize the impact their decisions have on the overall Downtown business community, particularly if the result is a

significant reduction in convenient parking available for Downtown customers and visitors. Without that essential short-term customer parking support, it will be difficult to attract and keep other Downtown businesses.

At least one major downtown employer, Genworth Financial, has taken responsibility for protecting the interests of its neighbors by prohibiting its employees from using on-street parking that is needed by those other businesses for their customers. In recent months, the security department of that employer has begun patrolling the streets near its downtown offices, looking for employees parking all day in on-street spaces. Warnings are issued to those employees with follow-up administrative action if caught again.

Local parking operators must be encouraged to offer monthly parking permits to individuals as a general practice. This is the norm in most cities across the country and is a necessary ingredient of a healthy parking system. Local property owners should be educated in the fact that there is a market demand for monthly permit parking sold on an individual basis and that, coupled with the additional capacity created by discontinuation of individually reserved spaces, this unmet demand represents an opportunity for additional income.

Paid On-Street Parking

The City should consider a return of parking meters to the on-street (curbside) parking system.

- This will provide an incentive for downtown employees to seek off-street parking alternatives and leave valuable on-street parking for downtown customers and visitors.
- Placing a cost on curbside parking will provide a financial incentive for private property owners to make paid parking available to employees seeking off-street alternatives. This will expand the effective parking supply by bringing more private parking spaces into the publicly available market.
- The meters can be designed to provide an initial "free" period (15-30 minutes) that would allow for quick "pick-up" stops without having to pay. This can ease concerns about implementing metered parking until the positive effects of a properly functioning system become apparent.

- The City can provide pre-paid parking cards that can be used at any of the City's meters. Some varieties all users to reinsert their cards at the end of their stay to stop their time and refund the unused fee to their car. These systems can also be programmed to prevent consecutive re-use of the same card in high demand spaces where the City does not want parkers to be able to extend their time beyond a posted limit.

- Dual-space meters can be used to reduce the initial capital cost (one meter controlling two spaces).

- The appearance of the meter should be considered in the selection process, with preference for meters that contribute to the "nostalgic" look, consistent with recent signage additions.

The City may want to considered newer technology that offers some advantages over traditional parking meter systems. However, as a first step on the path to a truly functional parking system, familiar standard electronic parking meters may be the best answer.

If the City chooses to expand the role of the Lynchburg Parking Authority in securing and promoting more public parking, management, it should consider placing responsibility for the on-street paid parking system with the Authority as well.

Removal of City Vehicles from the Midtown Garage

The Midtown Garage, particularly the top level that is accessed directly from Main Street is a very important part of the core parking supply. It should not be used to park City vehicles when another alternative is available. At a minimum it should not be used as a parking location for City vehicles that are not used for official business multiple times each day for short trips. The real cost of that convenience must be sufficient to justify the loss of access by the public to those spaces.

If parking meters are installed on the street, these spaces will immediately be in higher demand, particularly if priced correctly – with higher rates for the on-street meters than for the short-term garage spaces.

Paid Hourly Parking in the Midtown Garage

Paid hourly parking should again be made available on at least the top level of the Midtown Garage regardless of whether meters are installed on the street. Downtown Lynchburg must have at least one location where downtown visitors can legitimately park for more than two hours without having to return to their cars or risk a ticket. If meters are installed on the street, hourly parking on the top level of the Midtown Garage will certainly be a success. If meters are not installed, it is expected that paid hourly parking at the Midtown Garage will still be a success in terms of providing a needed parking option. It will also provide an incentive for other parking facilities to offer hourly parking.

A modern multi-space meter should be used to collect the fees without the need for an attendant. The meter should be placed under cover for maximum convenience. It should be equipped to accept credit cards as a convenience and for those who may not have cash at the time they park.

The hourly rates should be less than those charged at on-street meters as an incentive for regular parkers to move off the street.

Promotion of Hourly and Daily Parking Development

The City should conduct a campaign to educate property owners on the need for hourly and daily parking and the revenue opportunity it represents. A simple lack of understanding of market dynamics and an acceptance of current conditions as "normal" can stand in the way of the natural development of needed parking resources for broader public use.

Modern collection systems offer a great deal of security for the funds, convenience for the customer, and management information for the owner. Although some private owners may want to minimize their investment in equipment by installing less sophisticated, traditional "coin boxes", others may want to attract more business by installing pay stations that accept both cash and credit cards.

The City should set the pace by introducing newer technology in its own facilities. This leadership can have far-reaching impacts in moving the overall parking market forward.

Greater Involvement of the Lynchburg Parking Authority in Parking System Management

If empowered to do so, the Lynchburg Parking Authority is in a position to positively affect the underutilization of private resources by stimulating the public availability of those resources and demonstrating effective management practices to maximize their benefit to the community. Taking full advantage of opportunities with the greatest potential for effecting improvements in the downtown parking system will require the addition of operational staff to carry out the program. It will also increase the level of involvement and time commitment for Authority Board members.

1. The City should consider placing direct responsibility for all City owned public parking facilities and the proposed paid on-street parking program with the Lynchburg Parking Authority. This may require authorizing ordinances consistent with what is allowed for such authorities under state statutes.

2. If given this expanded role, the Authority should:

   - Hire a professional parking manager to oversee and expand the Authority's role in downtown parking. The Parking System Manager would be responsible for all day-to-day activities and supervision of operational staff.

   - The Authority should identify, from information provided in this report and through ongoing field observations, excess capacity in private downtown parking facilities that are not available for general public parking.

   - The Authority should seek to enter into management agreements with the owners to make that excess capacity available for general public use under Authority management.

     - LPA would provide the necessary equipment and oversight to operate the facility, issuing monthly contract permits and collecting any transient parking fees that may be part of the operation.

     - Very basic technologies should be used to implement this initiative.

- Monthly permits can be sold by the month or for multiple months.

- Basic "coin boxes" should be used to collect transient revenue on an honor system with enforcement patrols.

- No gate controls or parking attendants are anticipated during the early phases of the program. Gate controls and higher-level revenue control equipment may be needed at some point in the future to manage larger lots where there is a significant amount of short-term (short stay) transient traffic.

o Contractual arrangements with property owners should be "management agreements" where the property owner retains ultimate control over the property. The owner and the Authority share the revenue.

  - Under such agreements the Authority would incur minimal risk if revenues do not meet expectations. Unlike lease agreements, the type of management agreement proposed here involves no financial obligation to the owner except to share whatever revenues are generated on a percentage basis. Under this type of arrangement, the Authority and the owner would normally share revenues that exceed actual operating costs. A 50/50 split after operating costs is very common, particularly in a market where demand has not been clearly established. The agreement is intended to be a "win – win" arrangement with very little downside risk to either party.

  - The only risk to the Authority is the initial investment in setting up the paid parking operation but, under the proposed agreement format, these costs would be covered out of revenues first.

    - In the case of monthly contract parking, that investment is minimal once a means of administering monthly permit sales and enforcement has been established. More locations can be added with very minimal additional cost. New locations without transient parking would add some administrative time and require additional time for field staff to patrol for unauthorized parkers and expired time.

- Locations with transient parking would also require time for collecting cash from the coin boxes, but the coin boxes themselves are relatively inexpensive to purchase and install.

§ The owner's interests are protected because the owner retains ultimate control over the property. If the owner's business grows, or more of the building is leased, the number of spaces offered to the general public can be reduced. If a tenant moves out, leaving a building suite vacant for some period of time, additional parking spaces can be made available for monthly, daily, or transient parking to increase parking availability to the downtown community, provide additional revenues to the Authority and additional revenue to the owner until a new tenant can be found. Once promoted and recognized, this opportunity to use expanded parking revenues to help offset the loss of rents when building space is vacated is a strong incentive for owners to consider participation in the Authority's parking program.

o The Authority should establish a clear "brand" for its parking program with on-site signage and promotional materials. The public should be aware of locations that are part of the Authority's program as they move around Downtown Lynchburg.

o The Authority should also make minimum standards for facility maintenance part of the program. The maintenance can be required of the owner or be provided by the Authority as part of the operating expenses covered by revenues before any revenue sharing.

o As the program evolves over time, the Authority should seek to set an example for parking standards in the community by setting high maintenance standards for the facilities it manages and setting the pace for the introduction of new technologies that make the system more efficient and elevate the level of service to the public. Not only will this goal have a direct impact through the quality of the Authority's facilities, it will provide a strong incentive for private operators to raise their own standards as they compete for clients and customers.

o The Authority can demonstrate good facility design by using good design standards in reconfiguring program lots to increase their capacity and improve functionality. Other

privately held lots may follow suit when the example is set, helping achieve the overall objective of increasing downtown parking capacity.

Upgrade of Parking Facilities

In general, parking facilities in downtown Lynchburg need to be upgraded. Although the three structures owned by the City set a higher standard, particularly the Clay Street Deck and Holiday Inn Deck, there are facilities in the downtown core, both surface lots and structures, that are sub-standard on any scale. Many people feel uncomfortable when parking in a structure under the best of circumstances. This is particularly true in larger facilities where parkers may feel isolated from other activity. This discomfort is heightened when the facility is in poor physical condition. Visible structural and maintenance problems communicate a lack of care and a lack of security that makes poorly kept structures and lots less desirable and less valuable in terms of their ability to generate revenue for the owner. They also impact perceptions of available parking.

The quality of parking facilities reflects directly on the state of the City. An adage used for decades in the industry is that "parking makes the first impression and the last impression" for a business or a community. Older, poorly maintained parking facilities give the impression of a weak downtown. Newer, well-designed and well-maintained parking facilities give an initial impression of a more vibrant downtown. Just as planners are concerned about visual "gateways" to the downtown, parking facilities are a gateway in their own right.

Since many of the parking structures and lots that need attention are privately owned, it is a challenge for the City to effect improvements directly. However, the City should initiate a campaign within the local business community to bring attention to the need to "dress up" the multiple gateways represented by its parking facilities. In some cases, owners of buildings are so focused on the buildings themselves that the parking facilities are taken for granted and receive little attention. A parking facility is not as likely to receive attention as a building lobby, but a poorly maintained parking facility can spoil visitors' impression of the building before they ever reach the lobby.

A photo tour of current parking facilities across the downtown area would provide a sufficient basis to get the attention of the business community as a whole. Dirty floors, poor lighting, broken light fixtures, dirty signs,

accumulated trash, rusted beams, broken concrete, old signs, and abandoned, deteriorating parking attendant booths are common conditions. The structures with steel columns are poorly maintained and particularly unsightly.

The recent efforts by Lynch's Landing management to improve the appearance of the garage at 9th and Commerce when it took over management of that facility is encouraging, but property owners in general have a long way to go in creating the kind of initial impression that is needed if Downtown Lynchburg is to realize its goals for a healthy, vibrant Downtown.

Changing the Market Dynamics

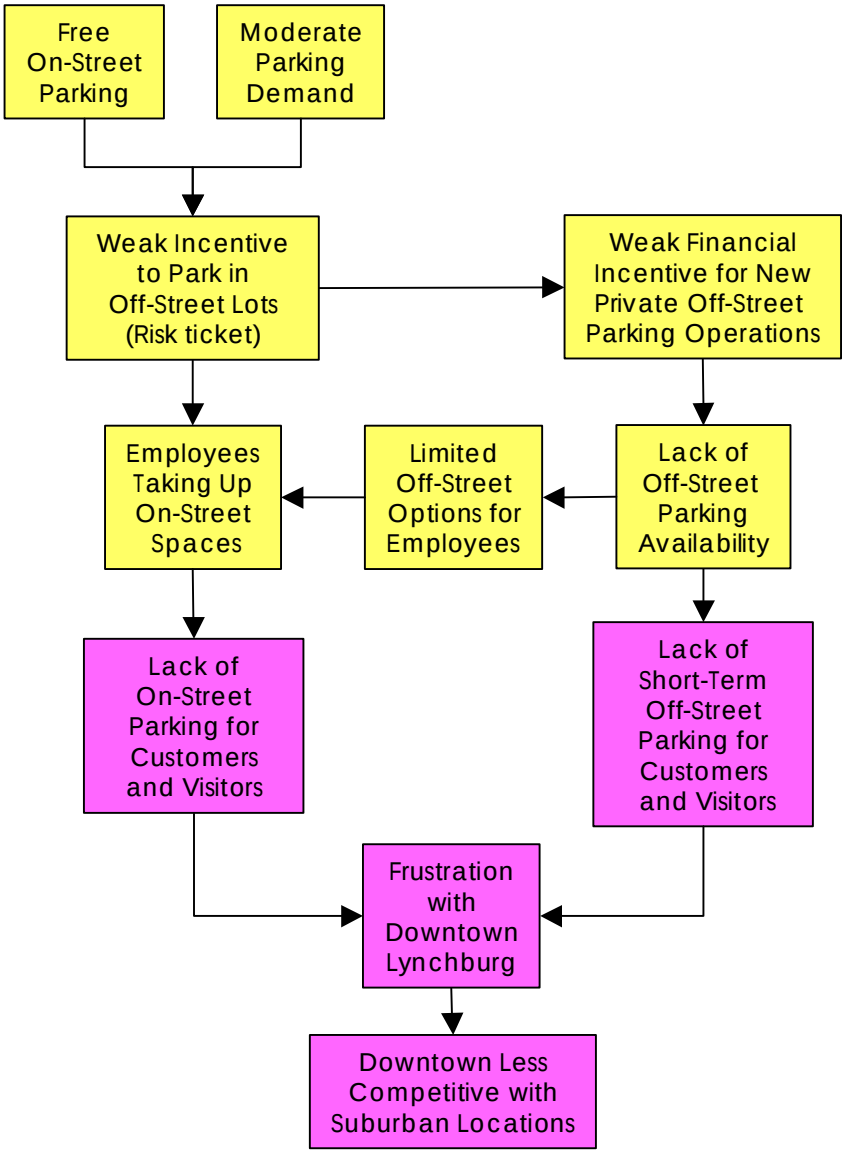
The two flow charts in FIGURES 19 and 20 that follow illustrate the current dynamics in the Downtown Lynchburg parking market and the results expected from implementation of the key changes recommended in this report. Those key changes are:

1. Implementation of paid on-street parking.
    - Implementation of paid on-street parking will provide the initial stimulus to move employees out of the on-street spaces and in search of off-street alternatives.
2. Expansion of the role of the Lynchburg Parking Authority to bring more privately owned parking capacity into the public market.
    - This will create a new opportunity for private lot owners to produce revenue from their unused space.
    - Operating contracts initiated by the Lynchburg Parking Authority, under proposed expanded responsibilities, will help bring more private capacity into public use.
    - The City can set the standard for public parking facilities by offering more parking options and better parking conditions.
    - More private parking lots will offer the "missing" parking elements of hourly and daily paid parking (as well as contract parking for individuals), because of competitive pressure.
    - Employees and downtown residents will have more off-street parking options and free up more on-street parking spaces.
    - Customers and visitors will find more on-street parking available at all times.
    - Customers and visitors will have options for parking for more than 2 hours without risking a parking ticket.
    - Public perceptions about parking and doing business in Downtown Lynchburg will improve and make the Downtown more competitive with suburban alternatives.

The following logic chart shows the principal dynamics that exist in the Downtown Lynchburg parking market. The end result is a perception of scarce parking and frustration with trying to do business or shop Downtown.

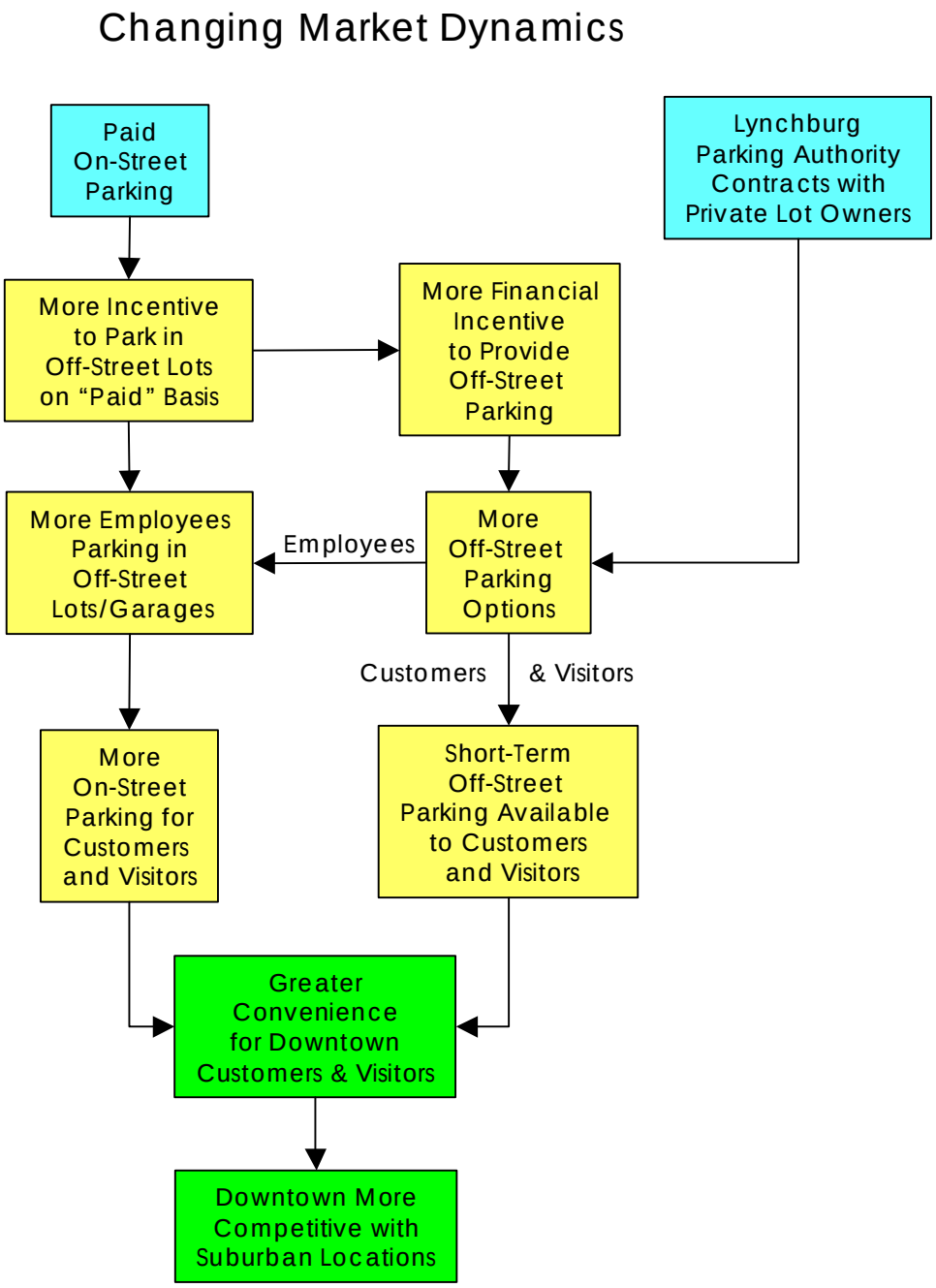
FIGURE 19

Current Market Dynamics



The following logic chart shows the expected impact of proposed changes in the current parking system and its management.

FIGURE 20



DEVELOPMENT OF FUTURE PARKING CAPACITY

The Lynchburg Downtown & Riverfront Plan proposes a series of parking development projects based on the full build-out envisioned in the plan. Information contained in that Plan concerning future development (additional square footage by sector) was more specific than the information made available to the team for this strategic analysis which makes it a good point of reference.

The Plan text in the Parking Analysis addendum states that this results in a need for approximately 4,000 additional parking spaces, although the tables indicate an increase of only 3,300. This includes approximately 600 new spaces needed to support an estimated 462,000 SF increase in the residential sector. If most of this additional parking capacity will be provided by developers of "new" residential buildings as part of their projects, most of that additional capacity will be provided as those residential developments come on line.

Considering the possible Plan overstatement of future parking demand by 1,500 spaces in the office, retail and government sectors, the projected need for 3,300 spaces may actually be closer to 1,200 spaces. This assumes efficient utilization of all existing and future public and private parking resources. It assumes that gaps in the current market in terms of the availability of hourly and daily transient parking, as well as monthly contract parking for individuals, is fully in place to bring all possible parking resources into the market. If these market corrections are not realized, the City will be under pressure to overbuild parking capacity in order to accommodate growing needs for public parking.

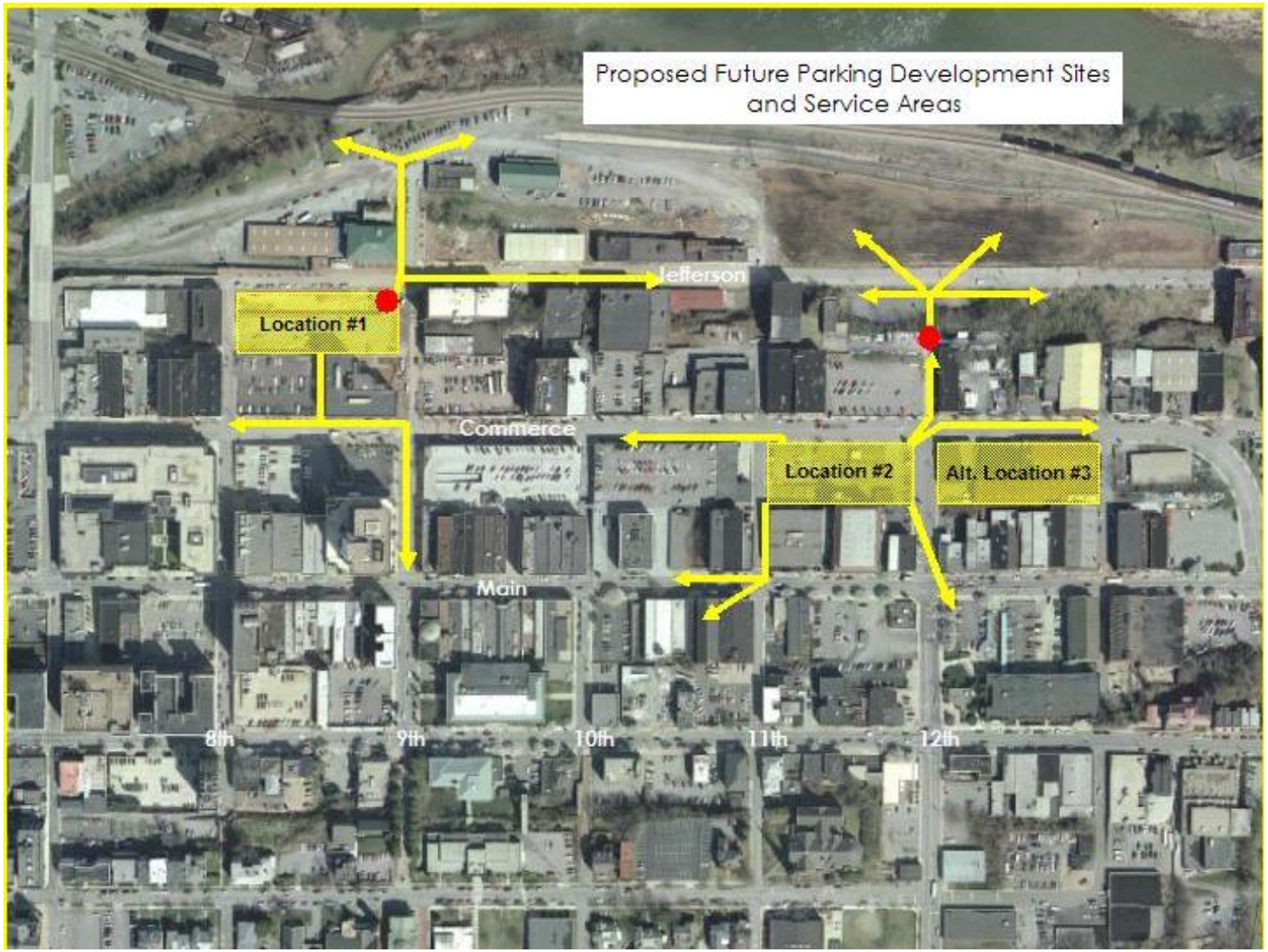
PROPOSED LOCATIONS FOR NEW PARKING DEVELOPMENT

There are two areas where existing conditions and future development prospects point toward the need for additional, publicly available parking.

- Area A - centered on the intersection of 7th and Main Streets
- Area B - centered on 12th and Commerce Street

FIGURE 22 shows the proposed location for Area A (Location #1) and two possible locations for Area B (Locations #2 and #3).

FIGURE 21


Proposed Future Parking Development Sites and Service Areas
Jefferson
Location #1
Commerce
Location #2
Alt. Location #3
Main
8th
9th
10th
11th
12th

AREA A

In terms of parking, this location is in the highest demand area of the City due, in part, to the presence of Genworth Financial and other major office buildings nearby. Genworth presently has arrangements for approximately 400 parking spaces for its employees in area lots and garages owned by others. Genworth is presently holding approximately 100 positions open in its downtown headquarter because of the lack of available parking. Current occupancy is at 80% or higher in 4 of the blocks within one block of that intersection. Only 82 spaces were available at the point of peak occupancy during the field surveys. Lynch's Landing management has also expressed concern about the ability to identify parking to support the prospective relocation of businesses that would require 40 to 100 spaces.

The obvious location for a large structure that would provide for long-term parking needs in this area is the block adjacent to the Genworth office building to the west, between Main and Commerce. This property is owned by Genworth. However, as stated earlier, the ideal location for new parking capacity is not always the best location to provide that capacity in terms of overall development opportunities for the area. This property is one of the last large footprints along Main Street that could be used as a site for a major future office, residential or mixed-use development. Such a development would likely include structured parking, but another location is preferable in terms of dedicating a site exclusively to parking.

F

Facility Location #1

The northern half of the block where the new Human Services Building is located is the preferred site for development of a new parking structure in this area of need. The exterior design of the parking structure should be consistent with the pattern and standard set by the Human Resources building and Amazement Square.

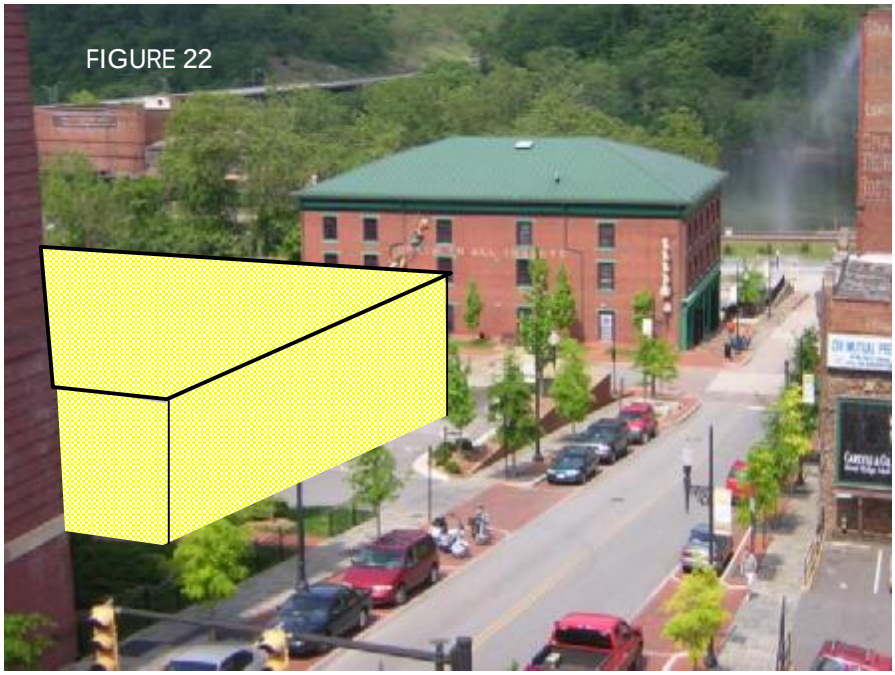


FIGURE 22

FIGURE 22 illustrates the proposed location. FIGURES 23-27 show several options for configuring a structure on that site.

- It is well positioned to provide relief to Genworth and within range of other office buildings along Main Street.
- It is located near existing shortages of residential parking and in the area with future prospects for additional residential conversions that are likely to need off-site parking.
- It is positioned to support increased activity levels in the planned Riverfront Park as that develops, particularly large events planned in the public areas.
- It would be positioned to support new retail development along Jefferson – at the same elevation. It would allow access to and from parking during evening hours without having to leave an active Jefferson Street area, a plus from the standpoint of security.
- It could provide supplemental visitor parking for the growing number of residential units expected along Jefferson Street.
- It could support additional activity levels that might be created by an expansion of Amazement Square activities and could provide parking for Amazement Square that would free up parking on the north side of the building for activities at the riverfront.
- It could support development of the property (current parking lot) at the northeast corner of 9th and Commerce Streets.
- It would be positioned to take maximum advantage of shared parking opportunities by serving Commerce Street and Main Street businesses on weekdays and Riverfront activities during the evening and on weekends.
- If the Riverfront develops as a late afternoon and "twilight" gathering place during the summer and the planned addition of angled parking along Jefferson is not sufficient to accommodate the resulting parking demand, this garage location would provide for very convenient overflow parking. Initially, the City may want to provide free after hours and weekend parking to introduce the public to the new garage, but apply reasonable off-peak fees once as demand grows and people have become accustomed to using this facility. It will be important to provide

adequate signage at the facility and signage at the Riverfront Park area to direct arriving drivers to that facility as the designated parking location for the Riverfront. On-street parking will always be the first choice for most people but, hopefully, growing activity associated with the planned Riverfront improvements and special events will bring people to this new facility. Apart from on-street parking and a small amount of surface lot parking, it would be the most convenient parking available for Riverfront visitors.

- The dimensions of the property allow for a more efficient design than would be possible at other locations. With a length of more than 300 feet, it offers very moderate ramp slopes that will allow all ramps to serve as parking aisles (parking on either side of the ramps), increasing the efficiency of the facility and lowering the overall cost per space. It is recommended that this more standard type of design be used rather than the configurations found in existing Lynchburg facilities so that full 2-way vertical circulation can be provided throughout the facility. That will allow access to multiple levels from any entry point. The scope of this study did not include a functional feasibility analysis for proposed garage sites and this site may pose some challenges in terms of configuring a ramp system that will eliminate or, at least minimize, the need to remove rock. This may limit the configuration options, but it appears that there may be good options.

- It has street exposure on 3 sides as potential access points for both vehicles and pedestrians.

- An at-grade pedestrian connection could be created and maintained between the new garage and Commerce Street. That connection could be preserved with any development of the existing surface lot that fronts Commerce Street.

- Elevators would provide a vertical pedestrian connection between Jefferson Street and Commerce Street. With the availability of the elevator in the Midtown Garage, this would provide level access between Jefferson Street and Main Street through public facilities for those with mobility limitations.

- It offers the opportunity to add street level retail and food establishments in this area of high daytime population and in close proximity to Riverfront visitors. The availability of those new retail and food establishments would not only provide new services, they would add to the streetscape and create a draw for users to park in the facility. However, the addition of retail may be limited by the specific configuration of the ramping system and could cost parking capacity that the

City would prefer to preserve. The 300 foot length may provide additional retail opportunities at the east and west ends.

- Drawbacks and Potential Solutions:

  - The site is an active multi-tier parking lot that is already providing a single layer of parking. Because part of the proposed structure would simply be replacing this existing surface lot parking, the cost per space for the net increase in parking capacity would be higher than if the structure were being built on unused ground. As the size of the new structure increases, that impact is lessened as the cost of the "lost" spaces is spread over a larger number of constructed garage spaces.

  - The main entrance to the new Human Services building is oriented diagonally toward the midblock point of 9th Street. If a multi-level parking structure is brought as close as possible ot 9th street in order to provide the largest possible footprint and highest possible capacity, it would interfere with the view to the Human Services building entrance. There is a similar concern in blocking the view to the front portion of Amazement Square from the intersetion of Main and 9th Streets.

    - Because of the block length, it would be possible to reduce the length of the parking structure and move the face of the structure further back from 9th Street. This would preserve more of the exposure for both of those buildings. It might also be a good location for additional streetscape treatments or a small, low profile retail footprint. However, reducing the length of the facility will reduce capacity and increase the overall cost per space because of lost efficiencies in the interior layout. For example, a 300 ft. structure with 10 ft. floor-to-floor heights would allow for a 5% ramp slope (maximum recommended for a ramp with parking), and parking against both end walls. Reducing the facilities length by 36 ft. may require removal of the end parking at both ends on all levels to keep the ramp slope within preferred design standards. This reduces the overall efficiency. However, there are several design alternatives that provide the maximum efficiency that the site will allow, including scissors designs that preserve efficiency with shorter garage lengths. Specific schematic options would have to be developed after a survey of the property and consideration of other design contstraints

such as required set-backs, topography, presence of rock, location of utilities, configuration of the surrounding street system, and a number of other factors.

- FIGURES 23 through 27 illustrate five configuration options that could be considered.
  - Alternative #1 uses the full length of the block but infringes on the view to and from the Human Resources main entrance.
  - Alternative #2 has a reduced length to provide for a plaza or retail at the east end to avoid blocking the view to and from the Human Resources main entrance.
  - Alternative #3 utilizes the portion of the site that fronts Commerce Street in order to increase capacity. Only the upper floors of the parking structure would extend over this property, but it could be designed to allow for the development of a building above that portion of the garage.
  - Alternative #4 adds some capacity over Alternative #2, but leaves the front portion of that site for development of a future building facing Commerce Street.
  - Alternative #5 includes street level retail along Commerce with additional parking above that height.

The scope for this study did not include a full site feasibility analysis for these sites or conceptual designs. This site, and other sites with significant elevation changes, present significant design challenges that will require the expertise of parking facility design specialists. The illustrations provided in this report are not formal "concept" designs, but are provided only to illustrate some potential configurations that can be considered in developing conceptual designs. Specific footprints, layout and elevator locations are for illustration purposes only without consideration to actual code requirements or other design considerations. The size and shape of the illustrated facilities do, however, approximate what the site would accommodate.

FIGURES

AREA B

Parking demand in Area B is presently much lower than in Area A to the west, but planned improvements on 12th Street and the development expected to take place along and near the bluff will certainly increase demand over time. The presence of the City Market and direct access to the new Riverfront Park via the planned addition of an overlook and elevator at the end of 12th Street can be expected to futher stimulate residential and retail development in this area of Downtown. The recommendation for this area is initial development of a well-defined and attractive surface parking lot, holding that site for later construction of a multi-level parking structure when warranted by increased demand.

Facility Location #2

The proposed location for Facility #2 is the half block along the south side of Commerce Street between 11th and 12th Streets. It is proposed that this location be initially land-banked as a surface lot, with the potential as a site for future development of a parking structure.

The lot should be well designed according to quality industry standards and enhanced with attractive landscaping that will be in keeping with the planned improvements along 12th Street. This lot should be used to set a new standard for the City.

- With good landscaping and architectural features lot that identify it as a City-owned public facility, it will be a natural extension of the 12th Street improvements and the planned Bluff Walk. It would be the preferred location for people visiting the Upper Bluff Walk and the overlook planned at the end of 12th Street.
- An attractive City parking lot, along with the 12th Street improvements, would confirm the City's "intersest" in this area, with the potential of stimulating more development.
- If the planned elevator between the Bluff Walk and Jefferson Street becomes a reality, this location could serve the Riverfront Park area and provide a connection to additional retail and food opportunities at the Commerce Street level, exposing Riverfront visitors to that area as the come and go to the parking lot.
- The lot is positioned to provide parking for the nearby City Market and, potentially, for residents of new loft apartments that may be added nearby.

- It could support a new development on the existing parking lot to the north across Commerce Street.
- It would provide an identifiable and desirable parking location to support the health and growth of retail businesses along Commerce Street, particularly east of 12th through the Commerce Street bend.
- The site has sufficient length to accommodate a shallow ramping system, but there may be obstacles that would limit the width of the garage to an extent that would cause a substantial loss in efficiency. The preferred width would be sufficient for two parallel modules that would serve both as parking aisles and as ramps. The site would have to be examined in some detail with full survey, topography, and set-back information in order to make that determination but, unlike Location #1 and Area A, most of this site is reasonably level without the need for rock removal.
- If a parking structure is built on this site, it offers three street exposures for vehicle and pedestrian access.
- It also offers three opportunities for retail exposure at street level – along Commerce, 11th and 12th Streets. The Commerce Street exposure would obviously offer the best retail exposure and retail at street level along Commerce Street would add interest and vitality to that block of Commerce Street, helping to connect activity centers to the east of 12th with the downtown core to the west. If the privately owned garage on Commerce Street between 10th and 11th Streets is eventually demolished and replaced with a new parking facility that also includes retail at the street level, it would invigorate that portion of Commerce Street and extend the retail activity area from 10th Street through the Commerce Street curve to Main Street. The introduction of this new retail along Commerce Street could provide essential services to the new residents living below along Jefferson Street, particularly if the proposed elevator is available to make a vertical connection.

Facility Location #3

This secondary location on the southeast corner of Commerce and 12th Streets would require demolition of existing buildings, but may provide additional buildable width to construct a facility that has 90-degree parking on parallel ramps with 2-way traffic. If site #2 cannot be acquired, the dimensions prove inadequate for an efficient design, or there are obstacles to construction, site #3 would be a good alternative.

- The principal benefit of this location are the dimensions of the site - allowing an efficient garage design.
- It would also allow for a right-turn entry from 12th Street both for traffic arriving on 12th from the south and for traffic that could be directed down 12th Street from Main.
- There are, however, several disadvantages of this site in comparison to Location #2:
    - The facility would be in nearly an equal position to serve the demand generators identified in the discussion of Location #2 but, by being one block further from the current core, it would not serve the concentrations of businesses on Main Street and even the City Hall block as well.
    - Developing this site would involve the additional cost to acquire an improved property, including demolition of existing buildings.
    - The site, directly across from an area on the north side of Commerce where future retail and residential development is likely to take place, might serve the area better as additional retail, perhaps with additional residential units on upper floors. Although 1st floor retail could be included in a parking structure on that site, placing additional residential above 2 or 3 levels of parking would not be consistent with other building heights in the area.
    - Unless Location #2 is developed with some type of retail, development of a parking facilitiy at Location #3 would leave an unfilled gap on Commerce Street between 11th and 12th Streets – even if a future replacement facility between 10th and 11th added retail to the streetscape.

FIGURE 23 Area A / Location #1 - Alternate #1

FIGURE 24 Area A / Location #1 - Alternate #2

FIGURE 25 Area A / Location #1 - Alternate #3

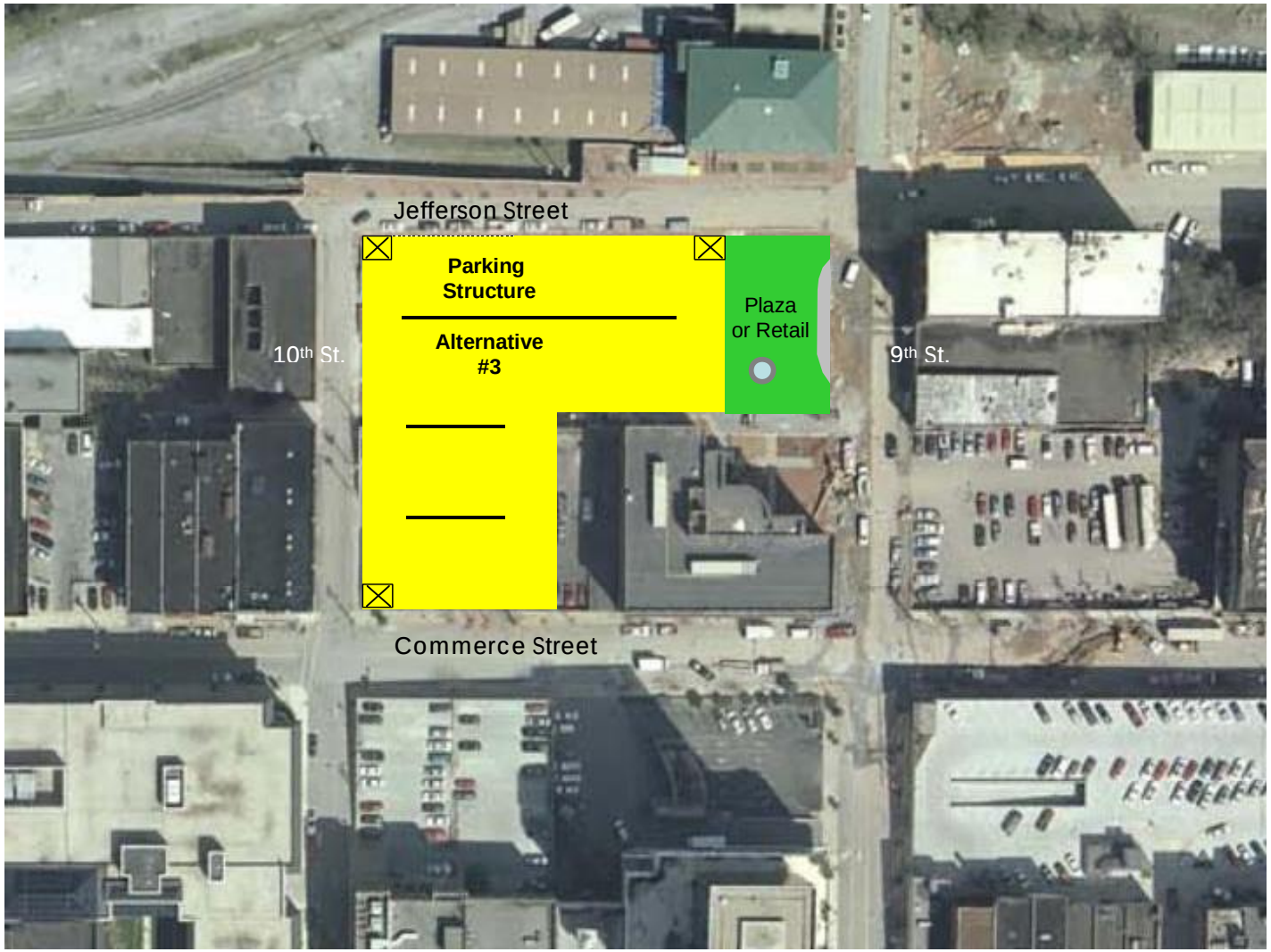


FIGURE 26 Area A / Location #1 - Alternate #4

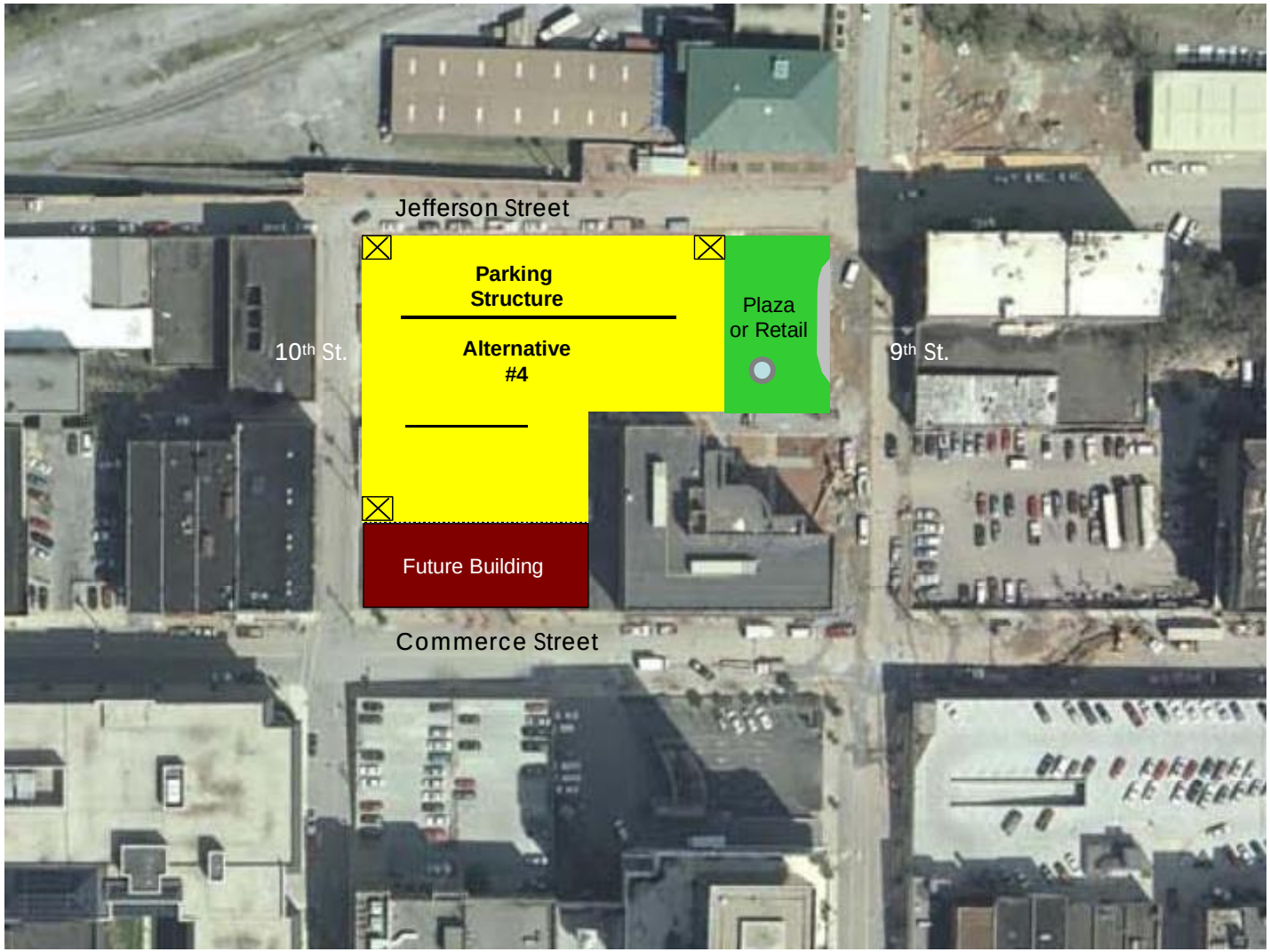


FIGURE 27 Area A / Location #1 - Alternate #5

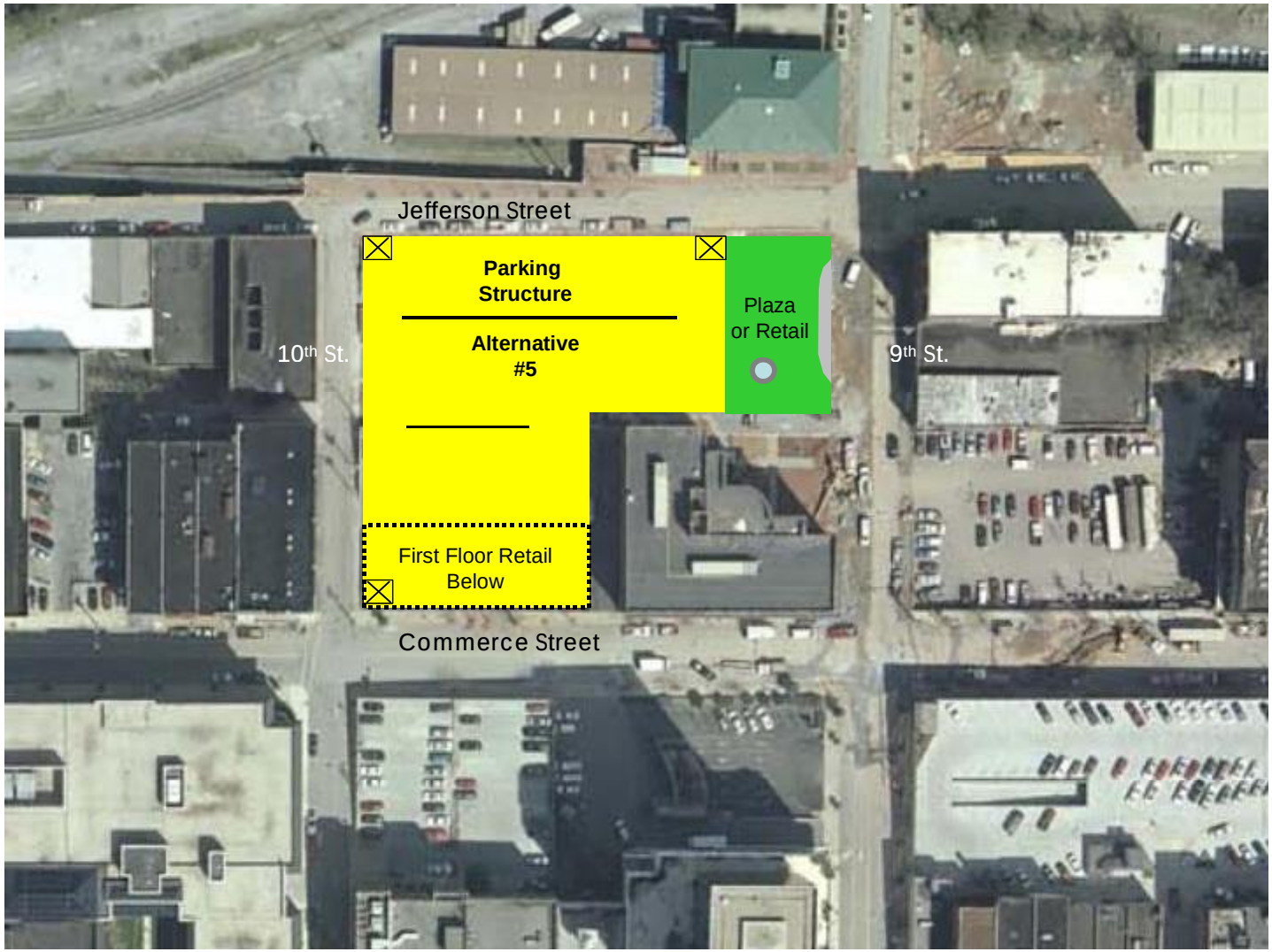


FIGURE 28

Examples of modern design concepts incorporating office, retail and residential components (*Carl Walker, Inc*. Projects)

FIGURE 29

Examples of modern design concepts incorporating office, retail and residential components (*Carl Walker, Inc*. Projects)

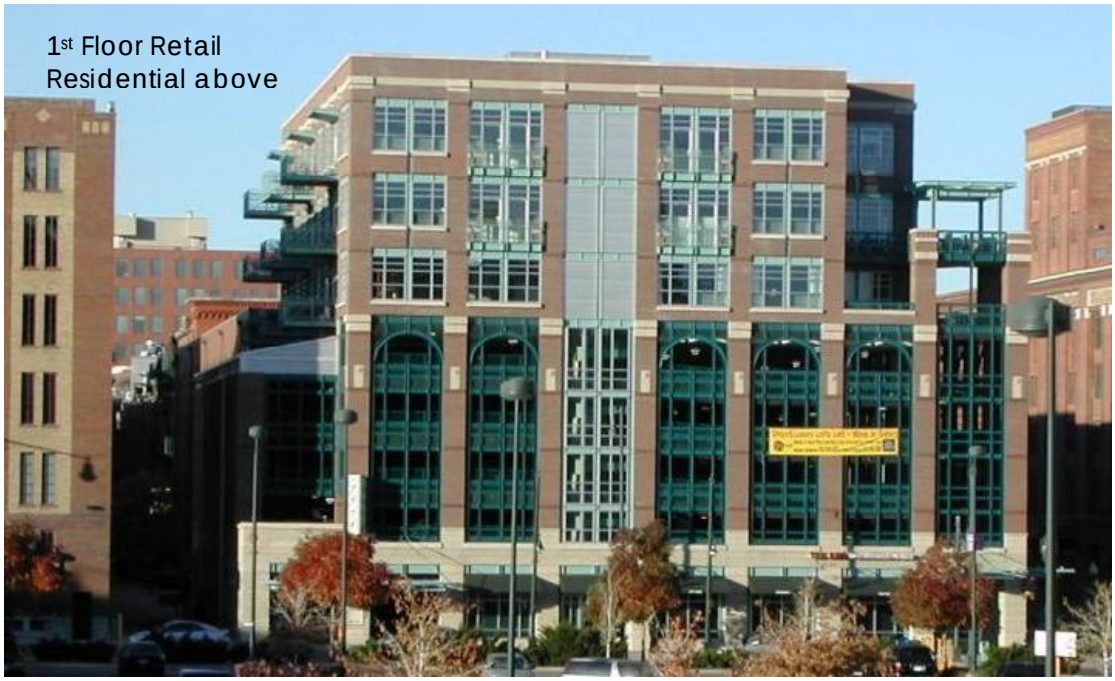


FIGURE 30

Examples of modern design concepts – street level treatments

(*Carl Walker, Inc*. Projects)

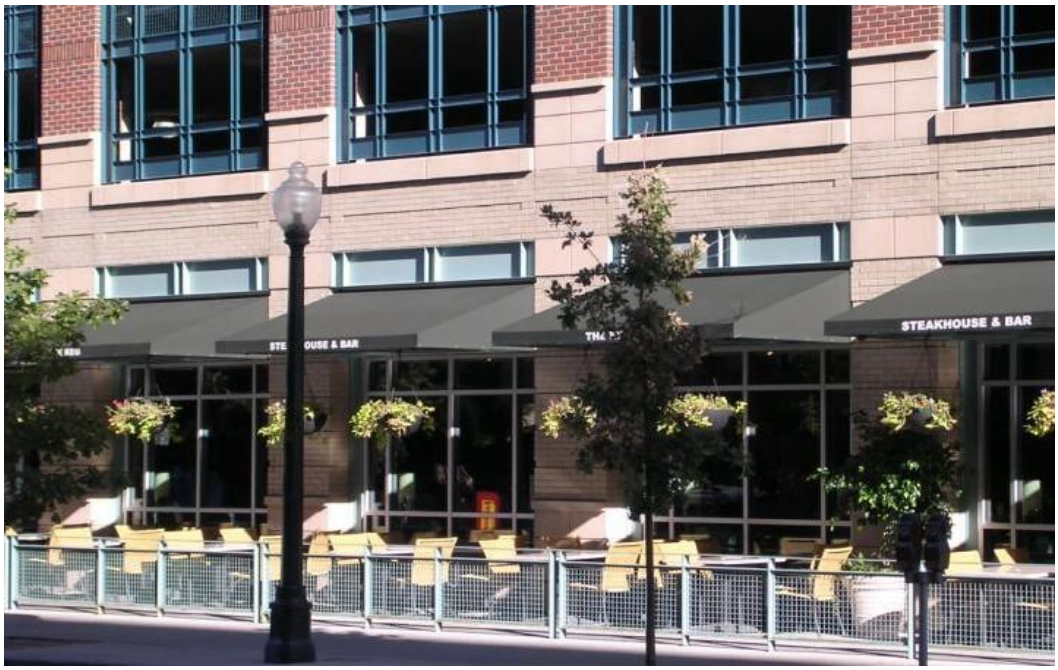


FIGURE 31

Examples of modern design concepts – residential "bookends" concept

(*Carl Walker, Inc*. Projects)

SCHEDULE FOR DEVELOPMENT OF NEW PARKING FACILITIES

Normally, scheduling for development of significant additions to the parking supply is dictated by known development activity that establishes a clear quantity and timetable for new parking demand. Although it is clear that the City and various entities working on behalf of the community have a vision for the development of new downtown features that will spur future development, projects that will generate sustained parking demand will depend primarily on the pace of private development activity. Several prospective private projects were identified during discussions with the City, but no specific timetables were available for those private projects.

9th & Jefferson Site

It is apparent that there is a current need for additional parking capacity in the vicinity of the Genworth Financial building because occupancy rates in that immediate area were at 80%. This is a workable margin of empty space if all needs are being met AND all of the unoccupied parking capacity is available for use without significant limitations. Since Genworth Financial has not filled positions in its downtown building because of a lack of parking to support those positions, it is clear that current needs are not being fully met. This problem is compounded by the lack of parking available to the general public (hourly, daily and monthly) in this area and throughout Downtown Lynchburg.

It is recommended that the City immediately move forward with plans to engage a parking design specialist to develop conceptual designs and a site feasibility analysis for a proposed structure at the 9th and Jefferson Street location. A detailed financial feasibility analysis would follow the design concept process to determine funding requirements and options for the City in developing the structure.

It is also recommended that the City move forward with implementation of the proposed paid on-street parking program and the other recommendations of this Strategic Parking Plan designed to stimulate the return of paid parking to the Downtown Lynchburg market. This will help provide a revenue stream needed to carry other parking program improvements forward to better the public and Downtown Lynchburg as a whole.

12th and Commerce Site

The City should work to secure and improve the 12th and Commerce Street site based on one of the "trigger" events described below. This should be a paid facility that provides hourly, daily and all day parking.

Current demand does not justify development of a parking structure, but the existing underutilized and poorly maintained parking lot could be transformed into an attractive facility that will support the area. Any of three events would be considered a "trigger" for renovating and opening that site as a public parking lot:

1) As part of the 12th Street improvement project if timed to coincide with creation of the proposed Bluff Walk and overlook at the end of 12th Street.

2) In advance of the start of construction of a parking structure in Area A – to accommodate displaced parkers.

3) In advance of demolition of the existing private garage located on the adjacent block (10th to 11th) for its removal or replacement. The new lot would be needed to accommodate those displaced parkers.

Looking Forward Into the Future

Development of parking facilities at the two proposed locations should serve the City well into the next 10 years, particularly if a parking structure is eventually developed at the 12th and Commerce Street location. The Downtown and Riverfront Plan identified a number of other potential sites for future parking development. The need for parking at those specific locations will not become apparent until additional development moves forward and specific areas of need can be identified.

However, the City should consider in its long-range plans the potential for developing "anchor" parking facilities on the east side and west side of the downtown area, with frequent shuttle service from each location into the downtown business district. One location is the large parking lot located at the west end of Court Street, west of 5th. The other would be on a large parcel on Main Street near the introduction of traffic from Route 29. The current Travelodge location is a possible site to serve this need.

The Court Street location would provide an east-west shuttle down Court Street and returning on Clay Street. This would provide support for the municipal functions along Court Street and Clay Street. With sufficient security at the site, it could be used to accommodate fluctuating parking demand, such as jury pool parking, leaving more parking on the street and in parking facilities along Court and Clay Streets for those doing business in the courts and other municipal offices.

The Main Street location on the east side of Downtown could be served by a second shuttle operating on a loop that includes Main, Commerce or Church Streets, depending, in part, on decisions ultimately made on one-way vs. two-way traffic. The routes could be modified or expanded in the future to follow actual development patterns.

These facilities can be expected to provide for daily employee parking as their primary user group during the week, but could be used as supplemental parking for large festival activities in the Riverfront area. Potential locations and routes are illustrated in FIGURE 39. These facilities can be particularly attractive if they are designed specifically as multi-modal facilities that include covered shuttle bus boarding areas. The east location would also be an ideal location for a Visitor Center with ample parking and an opportunity for visitors to take a shuttle to points of interest rather than driving.

This concept has proven very successful in cities such as Chattanooga, Tennessee. The layout of that program and photos of the facilities are included in the photos that follow (FIGURES 32-38). A significant difference between the Chattanooga program and the concept envisioned for Lynchburg is that the both parking facilities in the Chattanooga program are served by the same shuttle route that operates along the downtown core. The routes are also flat, allowing the use of environmentally friendly electric buses. If the two Lynchburg routes were connected, it would involve climbs that may make electric buses impractical for that portion of the route. However, the two proposed lateral routes, operating out of the anchor parking facilities on generally level routes, could be supplemented by a gas-powered circulator "loop" route that provides a connection between the upper and lower elevations.

Development of anchor facilities and supporting shuttle service entails some specific commitments to service as well as some specific opportunities for participation by the private sector.

- The location must be secure and be perceived as secure by users, particularly during the winter when employees return to the lot after dark.

- Shuttles should run continuously through the day, although additional buses can be added to the routes during the morning and afternoon commute periods. Employees need to know that they can access their vehicles at any time during the day.

- Shuttles have to run sufficiently late into the evening to support all parkers, particularly if those locations are used as supplemental parking for downtown events.

- Covered shelters at the lot or parking structure are beneficial, allowing riders to be protected from the rain while waiting for the next bus.

- Covered shelters, similar to the ones already in place along downtown transit routes, would also encourage usage. Perhaps arrangements could be made to use some of the existing transit shelters that may be on the shuttle routes. Additional shuttle stops may, however, result in the loss of some existing on-street parking.

- The private sector may find financial support for such a system a good alternative to taking valuable core area land or expending the capital necessary to provide on-site parking.

FIGURE 32

Chattanooga, TN

"Anchor" Garage
& Shuttle Concept

FIGURE 33
FIGURE 34

Chattanooga

North Garage

FIGURE 35

Chattanooga

Electric Shuttle

FIGURE 36

Chattanooga

South Garage

FIGURE 37

Chattanooga

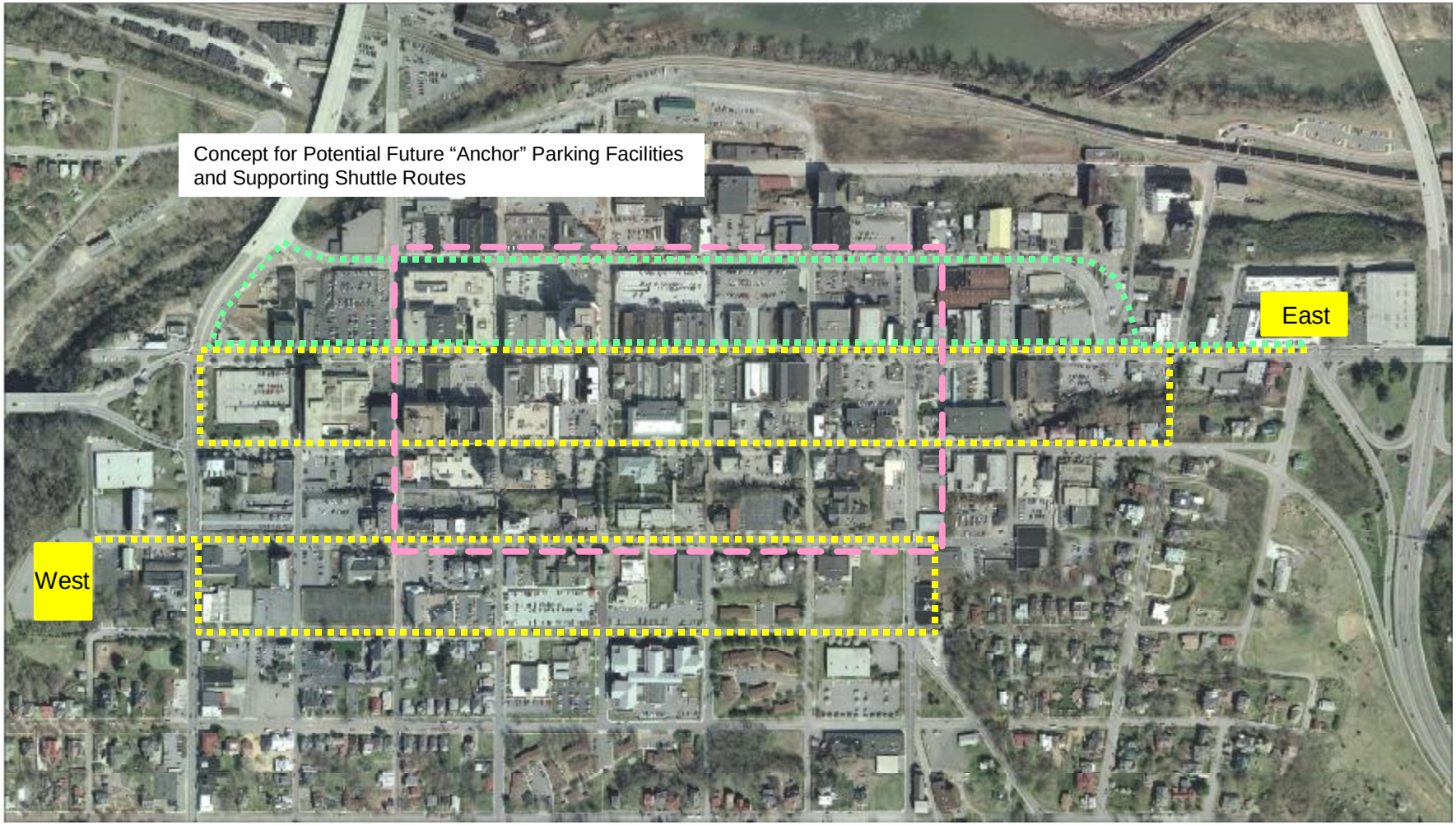
South Garage
Boarding Area

FIGURE 38

Chattanooga

South Garage
Shuttle Maintenance Facility

FIGURE 39 - Potential Future Lynchburg "Anchor" Parking Facilities and Supporting Shuttle Routes



SUMMARY OF RECOMMENDATIONS

GOALS

The following is a summary of the goals that underlie the recommendations that follow.

- Increase the level of efficiency in the utilization of existing public and private parking resources in order to expand the "effective" parking supply.
- Protect on-street parking for use by customers and downtown visitors.
- Increase the availability of off-street daily and monthly parking for employees to reduce their need to park in on-street spaces.
- increase the availability of hourly parking for customers and visitors
- Increase the "street visibility" of public parking to reduce search times an improve perceptions about parking availability.
- Increase effective utilization of available parking resources and increase customer convenience by providing readily accessible information to the public about available parking downtown.
- Provide up-to-date information about parking options and availability those involved in downtown development, including private developers.
- Expand revenue stream to fund system improvements.
- Limit the amount of new parking capacity that must be funded by the City.
- Improve and expand the City's involvement in improving the parking system while limiting risk and capital investment.
- Require that new residential developments provide adequate parking for their projects, either on-site, through space obligations of at least 10 years, or through in-lieu contributions to the City's parking development program.

RECOMMENDED ACTIONS

City of Lynchburg:

1) Expand the role of the Lynchburg Parking Authority to include:

   a) creation and management of an on-street paid parking system

   b) more active involvement in the acquisition of parking management contracts with private property owners.

   c) development of a professional parking staff to manage a broader parking program

2) Initiate paid on-street parking to increase the availability of this critical resource by customers and visitors, and to re-establish paid parking as a part of the Lynchburg market.

   a) Place responsibility for implementing and managing the program with the Lynchburg Parking Authority.

   b) Begin a phased program to install electronic parking meters, beginning with Main Street and moving outward in one-block increments to carry the program forward.

   c) Install electronic parking meters equipped to:

      (1) accept smart cards (option for additional customer convenience and merchant validation program)

      (2) allow a "complimentary" period by pressing a button on the meter and initially program the meters to provide 30-minutes of complimentary parking to allow for short stops without charge.

      (3) allow automatic daily adjustments in rates and time limits for flexible "after hours" and weekend operation – allowing longer stays at different rates.

   d) Dedicate revenues to support of the parking program and improvements in parking assets. Excess revenues should be retained to fund future capital projects.

   e) Use parking revenues to purchase a hand-held enforcement system to improve efficiency and data collection capabilities.

3) Parking for New Residential Developments:

   a) Require that new residential buildings provide sufficient parking on-site, or within close proximity (specified distance, e.g. 300 ft.) of the property, to meet the needs of its residents at a composite ratio of at least 1.0 spaces for 1-Bedroom units and 1.5 spaces for units with 2 or more bedrooms.

   b) Require that new residential conversions (of exiting buildings) provide parking at a ratio of 1.0 spaces per unit on-site or within a specified distance of the property that is obligated to the property owner / developer for a minimum of 5 years from the issue of the Certificate of Occupancy for the building. Specific areas that are exclusively residential may be excluded if sufficient on-street capacity is available.

   c) Establish an In-Lieu fee program that allows residential developers who are unable or unwilling to provide required on-site parking to contribute an In-Lieu fee to the City or the Lynchburg Parking Authority (as applicable) for the development of parking. The City or the Authority should identify additional future parking development sites that can be funded or partially funded by these contributions.

12) Act as a consolidator of land and funds for development of larger, efficient parking facilities to serve the needs of multiple small developers who, individually, would not be able to create those facilities. (This could be an expanded role of the Lynchburg Parking Authority.)

   a) Identify appropriate sites in areas of coming development that can be land-banked for future parking development – sites that are well positioned to serve the new development and have sufficient dimensions to accommodate an efficient design.

   b) Provide an opportunity for developers (without specific parking requirements per the zoning ordinance) to voluntarily secure parking in a shared facility in order to satisfy their needs and the requirements set by their lenders. This will encourage development of properties that cannot accommodate parking on-site.

4) Make the parking inventory and occupancy database information developed during the course of this study available to community development, real estate firms, and other entities promoting development and the location of both businesses and residents downtown – to help in identifying

parking that may be available for downtown business seeking additional parking and for potential new businesses and tenants considering a downtown location.

Assign someone to make regular updates to the information, keeping it current.

5) Initiate a full site feasibility analysis and financial feasibility study, for the development of a new parking structure on the north side of the Human Services Building, using the north half of the block bounded by Jefferson, 8th and 9th Streets. The objective would be the development of a parking structure with a net gain of 300-500 parking spaces. This structure should be configured to provide hourly and daily paid parking in addition to monthly contract parking for area residents and employees.

6) Initiate a full site feasibility analysis for future development of a parking structure on the site of the existing parking area on the south side of Commerce Street between 11th and 12th Streets.

   a) In the near term that site, if suitable for a future structure, should be rehabilitated as a surface parking lot, configured, appointed and timed to correspond to the planned 12th Street and Bluff Walk developments. If plans move forward to demolish the private garage located on Commerce between 10th and 11th, the City should consider developing the lot in advance of the demolition. The same is true if the City decides to develop the proposed parking structure on the 9th and Jefferson site, making a new 12th and Jefferson lot available to temporarily accommodate those displaced parkers.

   b) If that site does not prove suitable for the described parking structure or the City is unable to acquire the property, an alternate location immediately across 12th Street to the east should be examined for potential future development of a parking structure under the same criteria.

   c) Future development of a parking structure on that site will be conditioned on additional development adding sufficient demand to the area that the capacity of the new lot is exhausted.

   d) If a parking structure is developed, the City should consider inclusion of first floor retail on the Commerce Street exposure.

7) Implement the facility improvement recommendations provided with this Strategic Plan as a separate report including, specifically:

a) Discontinuation of individually reserved spaces in favor of permits sold by level – to allow moderate oversell of monthly contract parking. This will increase revenues but, more importantly, it will increase the effective capacity of the facility and provide more public parking.

b) Conversion of all spaces on the top level of the Midtown Garage (except for ADA spaces) to paid hourly parking for the general public, removing all existing reserved spaces to other levels or other facilities.

c) Specific improvements in parking facility identification.

d) Improvements in the overall signage program.

e) Correction of some specific existing barriers to ADA access.

f) Corrections in the configurations of existing ADA parking spaces.

g) Implementation of a consistent, ongoing maintenance and repair program.

8) Review current provisions for ADA parking throughout the city and City owned parking facilities.

a) Bring ADA spaces in conformance to standards.

b) Examine each existing on-street ADA parking space and correct any obstructions, such as trees, trash cans, light poles, etc., that may render the space difficult or unusable.

c) Examine ADA spaces that are located on slopes for alternatives that would provide a more level surface for safer entry and exit from the vehicle for drivers or passengers with physical impairments.

d) Engage the disabled community in looking for workable alternatives that may not be readily apparent or that may involve some compromise of standards in order to achieve a solution that is actually more workable than strict compliance with broad regulations.

Lynchburg Parking Authority:

1) If the role of the Authority is expanded to include more direct operational responsibility for City owned parking facilities, hire a professional parking manager to manage the development and day-to-day operations of the expanded Authority parking program.

2) Hire or absorb the necessary line staff to provide enforcement of the proposed on-street paid parking program and to administer new off-street parking assets.

3) Seek out management contracts with private parking lot owners to convert portions of those lots to paid parking (the entire lot if available).

   a) Enter into "Management Agreements" (not leases) with owners, including area churches, to make excess capacity on existing lots available to the public on a paid basis.

      (1) The owner retains ultimate control over space allocation to protect the owner's interests - removing a potential barrier to participation.

      (2) The Authority funds and provides the initial equipment, in most cases a standard, tamper-resistant manual coin box, signage, striping modifications and stall numbers. More sophisticated collection methods can be considered on larger locations as the program progresses and revenue streams are established.

      (3) After those initial equipment and set-up costs are paid, the owner and the Authority would share (50/50) in surplus revenues above ongoing operational costs such as enforcement, collection, issue of permits, insurance, maintenance, etc. All equipment would remain the property of the Authority and can be moved to another location if paid parking at the initial location is subsequently closed.

   b) Use these new locations to provide hourly, daily and monthly parking for individuals - filling the critical need for those options.

4) Establish a recognizable brand for the Authority to be used on all parking facilities that are part of the Lynchburg Parking Authority program – whether owned or managed.

5) Identify future development sites where additional public parking can be provided as part of the project.

a) Where the need for additional public parking is clear, as indicated by high demand, limited supply and parking rates that indicate financial feasibility, the Authority should encourage private developers to build additional parking capacity into their projects for public use and to provide the developer an additional revenue source. The Authority can offer to provide professional management services and include that location in the Authority's parking program and promotions.

b) In some cases, the City or Authority can use lease-back arrangements to secure additional public parking in private facilities. However, because of the potential financial risk, those commitments should be limited to locations where the need and the revenue potential are clear. The exception would be if it is clear that the additional parking capacity would serve as an economic stimulus for new development or business relocations that would represent a significant increase in tax revenues.

6) Use data provided in the study to establish a parking database to identify private parking facilities with excess capacity that can be brought into the public parking program as described earlier.

7) Create a Lynchburg Parking Authority website linked to the City's website.

a) Describe the role and mission of the Authority

b) Lay out the parking facility management program as described earlier, describing benefits to property owners who may be interested in participating.

c) Provide information about parking space availability for parking facilities in the Authority's program.

d) Consider including information about private parking facilities that are not managed by the Authority but have agreed to meet certain standards for facility upkeep. As a condition of inclusion, these property owners may be required to provide a specified portion of their facility as paid hourly or daily parking as determined by the Authority.

Special consideration for additional functional analysis and parking facility design development

In addition to the normal challenges involved in parking facility design, the topography of sites for development of parking structures in Lynchburg presents special challenges. Finding design solutions that provide good functionality and achieve a degree of efficiency may be very difficult, affecting both the service level provided by the facility and the cost of the facility itself. Whether the City chooses to have *Carl Walker* assist with these next steps or engages another firm, it is critical that the City use a structural engineering firm that is a parking facility design specialist to develop both preliminary concepts and final designs.

Parking structures are more difficult to design properly than typical buildings. Unlike buildings that have a closed, climate-controlled environment, parking structures are open to all weather conditions and temperature changes. Expansion and contraction issues, as well as details related to durability, are far more critical, with the potential to cause serious structural problems and involve very expensive repairs if not fully understood and factored into the design. This is specialized knowledge that architectural firms typically do not have, regardless of their experience in designing large buildings.

A parking structure design specialist will also have the experience to apply a wide range of design approaches to solve problems created by the topography, helping to ensure that the facility can provide the operational functionality to serve the needs for which it is intended – with design flexibilities that allow it to continue doing so as conditions change over time. The interior circulation system, including geometry of the spaces, drive aisles and ramps make the difference between a facility that is attractive to parkers and one that they simply tolerate. This affects both the service level and the ability of the facility to generate revenue.

Parking design firms sometimes have in-house architects but more often work in conjunction with local architectural firms to create an exterior design that is in keeping with the character of local architecture. Parking specialists are accustomed to designing from the inside out, considering functionality first and then providing the structural features that will support the creativity that an architect brings to the project. This arrangement typically produces the best results. The reverse arrangement, with the architect making fundamental design decisions that may be driven more by appearance than functionality, can result in sub-standard designs with significant and unnecessary compromises in the ability of the structure to serve its purpose well. In contrast, when an experienced parking design specialist leads the design team, the facility is much more likely to perform well with little or no compromise in the architect's ability to be creative and to develop an exterior appearance that compliments its surroundings.

APPENDIX

- Inventory by Block
- Occupancy by Block
- Available Spaces by Block
- Occupancy Percentage by Block
- Land Use Analysis