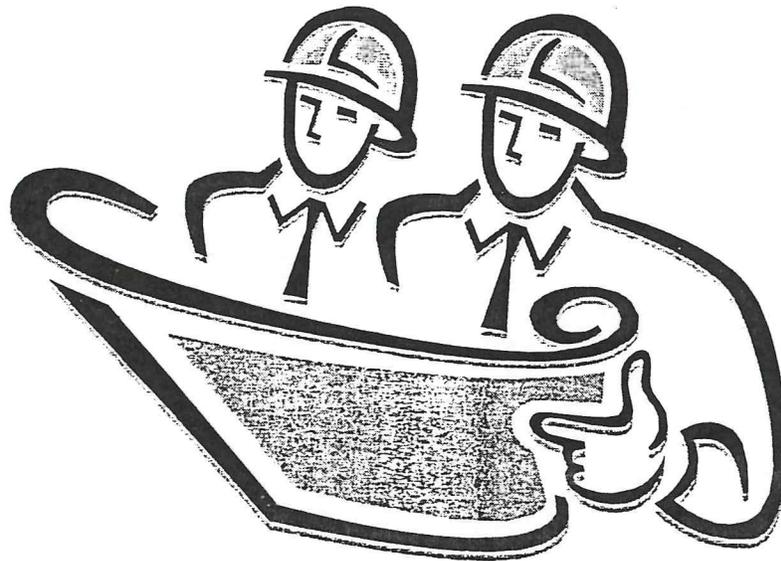


DOWNTOWN LEWISTON PARKING STUDY



Lewiston-Auburn Comprehensive Transportation Study
November 25, 1998

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Executive Summary

Lewiston is not alone. Some level of parking problem is common to all city downtowns throughout the United States. Downtown area parking demand is directly related to the amount and intensity of land use and activities. The most active and successful downtowns generally have the greatest parking demand and, usually, the most parking problems.

While Downtown Lewiston's position as a retail center has continued to erode, the number of people working in the downtown has actually increased in the past decade. The demand for parking in Downtown Lewiston has also increased in this time span. New parking garages have been built for the LL Bean Call Center and the Central Maine Medical Center, enabling these businesses to expand.

The continuing development of the Bates Mill as a major employment center, a new district court house, riverfront and park improvements, increased office utilization and the desire for additional retail development all are causing people to be excited about the potential of the downtown. However, many are also concerned about the limits to this potential. The lack of sufficient supplies of adequate parking may be one of these limits.

The objectives of the study are to plan for both the short-term and long-term parking needs in Downtown Lewiston. The adequacy of current parking facilities are reviewed and recommendations for additional facilities are made as redevelopment plans for the area proceed.

Some of the report's findings:

- The total municipally controlled parking spaces (excluding private parking facilities) in the downtown study area is 1840 with: over 475 free on-street spaces, approximately 200 metered on-street spaces, over 725 spaces in the two municipal parking facilities and over 300 spaces at the Bates Mill Enterprise Complex.
- While observations indicate that the overall supply of on-street parking in the study area appears to be adequate, parking demand is not evenly distributed throughout the downtown.
- The Lisbon Street and Park Street areas between Pine Street and Main Street have the highest number of parking violations per legal parking space.
- The Centre Ville garage is expected to be filled to approximately 85% of capacity following the assignment of spaces to Bates Mill tenants.
- Following the re-striping planned for the Summer of 1998, the Park Street municipal lot is expected to be filled to 75% of capacity.

- At the Bates Mill, current utilization of the parking lots often exceeds the actual supply of parking. Furthermore, as major tenants plan to increase their staffing levels, overall parking demand will increase to easily take up the capacity of the Lincoln Street lot that is currently under construction.
- If buildings in the Lisbon Street corridor were fully occupied with businesses employing workers in office occupations, the parking demand in this area would increase by at least 350 long-term spaces.
- If plans for just the Bates Mill were fully realized, the overall parking demand in the downtown study would more than double. Providing sufficient parking supply for this large an increase would be difficult and would require over 40 acres in surface parking.

A table summarizing recommendations from the study appears on the next two pages. Many of the recommendations depend on assumptions (the amount of future development, etc.) that, if not realized, would eliminate the need for the recommendation. For an explanation and further discussion of these recommendations, please refer to the body of the report on Pages 24-32. If all of these recommendations were implemented, it would add over 4200 parking spaces to the Downtown Lewiston study area and cost at least \$33 million to construct.

Summary of Recommendations

	Description (please see report for further explanation and discussion)	Time Frame	Change in short term parking spaces	Change in long term/ intermediate term parking spaces	Cost
1	Complete re-stripping of the Park Street municipal lot.	Immediate		35	Funded
2	Allow on-street parking on west face of the Centre Ville Parking Garage on Canal Street.	Immediate	8		Low
3	Eliminate unrestricted free parking on Canal Street, from Ash Street to Chestnut Street.	Immediate	27	-27	Low
4	Complete the construction of the Lincoln Street Lot at the Bates Mill Enterprise Complex.	Immediate		95	Funded
5	Parking spaces in front of Bates Mill buildings 1 and 2 should be restricted by 2-hour time limits.	Immediate	97	-97	Low
6	Retain existing parking meters in highly utilized locations.	Immediate	+		Low
7	The overtime parking fee should be increased	Immediate	+		Increases City Revenues
8	In the highest demand areas, free on-street parking spaces should be limited to 15 minutes or ½ hour only.	Short Term	+		Low
9	Implement changes in the City's scofflaw ordinance	Immediate	+		Increases City Revenues
10	Offer a "forgiveness ticket" for first time offenders of overtime parking only.	Immediate			Low
11	Adopt a graduated fine schedule for repeat offenders and non-paying violators.	Immediate			Low
12	Change time duration of specific parking areas to better reflect desired turnover rates.	Immediate	+		Low
13	Enact Bates Mill Enterprise Complex permit policy.	Immediate	+		Low
14	Increase patrol of "problem areas".	Short Term	+		Increases City Revenues
15	Encourage merchants to participate in full/partial parking validation for shoppers using public garage or lot.	Short Term	+		Low
16	Create a map of parking in the downtown area describing type/duration of parking.	Short Term	+		Low
17	Administer a survey of people parking downtown.	Short Term			\$ 7,500
18	Identify the location and construct 1 to 3 small parking lots accessible from Lisbon Street.	Intermediate Term		100	\$ 600,000

0 = LURC

Summary of Recommendations

19	Evaluate the feasibility of a two level (120 space) addition to the Canal Street garage.	Intermediate Term		120	\$ 1,440,000
20	Construct intermediate term on-street angle parking on the north face of Kennedy Park on Pine Street.	Intermediate Term	20		\$ 50,000
21	Construct new parking at the Bates Mill commensurate with the rate of development at the Mill.	Intermediate Term		1600	\$ 16,600,000
22	Construct a parking structure as part of new State District Court.	Intermediate Term		400	\$ 4,800,000
23	Construct a new on-site or adjacent parking structures at the Bates Mill Enterprise Complex.	Long Term		500	\$ 6,000,000
24	Construct other surface parking lots adjacent to the Bates Mill site toward the river and on the periphery of downtown.	Long Term		500	\$ 1,500,000
25	Construct satellite surface parking lots.	Long Term		1000	\$ 3,000,000
26	Increase the Share of non SOV modes	Long Term		?	?
Totals			252	4226	\$ 33,997,500

Introduction

The City of Lewiston asked the Lewiston-Auburn Comprehensive Transportation Study (LACTS) to complete this parking study for Downtown Lewiston. This study is included in the annual Unified Planning Work Program, which identifies transportation planning activities in the Lewiston-Auburn area.

The proposed elements of this study were presented to the Lewiston City Council at a meeting on February 11, 1998. As discussed at that meeting, the objectives of the study are to plan for both the short-term and long-term parking needs in Downtown Lewiston. The adequacy of current parking facilities are reviewed and recommendations for additional facilities are made as redevelopment plans for the area proceed. This includes assessing both the sources of funds for new parking facilities and potential user charges for parking.

LACTS completed an extensive data collection effort in order to assess the current parking situation. This included surveys of the number and location of existing on-street and municipal parking spaces. The number of parking violations by location, along with observations on utilization of these parking spaces, is used to help quantify high demand locations. LACTS also interviewed over fifteen concerned and knowledgeable individuals on their assessment of parking issues and problems in the downtown. These individuals represented downtown business groups, economic development groups, city government, police, real estate interests and others. A number of existing reports, plans and studies were obtained and researched. A list of these documents appears in Appendix I. Several of these reports discussed development plans for downtown and are used to assist in assessing future parking demand in the downtown.

Parking studies traditionally are very data intensive and require significant labor. Such studies assess parking space usage by systematically observing such characteristics as: accumulation- the filling up and emptying of supply; duration- the amount of time a space is occupied; and turnover- the number of vehicles a parking space serves over a specified time period. Parking studies of Downtown Lewiston completed in 1971, 1978 and 1985 used these methods, in particular, to quantify excess demand for on-street parking¹. In order to save time and money and because changes in land use have such a significant impact on demand, this study uses parking violations and generalized observations to quantify the supply/demand relationship for on-street parking. It is interesting to note, however, that parking patterns found in this study are quite similar to the previous studies even though land uses and the mix of building tenants have changed substantially.

¹ Please see Appendix I

Background

Lewiston is not alone. Some level of parking problem is common to all city downtowns throughout the United States. The inherent result of a concentration of considerable activity in a limited area is that there is limited space available to park the very large number of vehicles attracted to the area. Downtown area parking demand is directly related to the amount and intensity of land use and activities. The most active and successful downtowns generally have the greatest parking demand and, usually, the most parking problems.

While Downtown Lewiston's position as a retail center has continued to erode, the number of people working in the downtown has actually increased in the past decade. The demand for parking in Downtown Lewiston has also increased over the past several years. New private parking garages have been built for the LL Bean Call Center and the Central Maine Medical Center, enabling these businesses to expand.

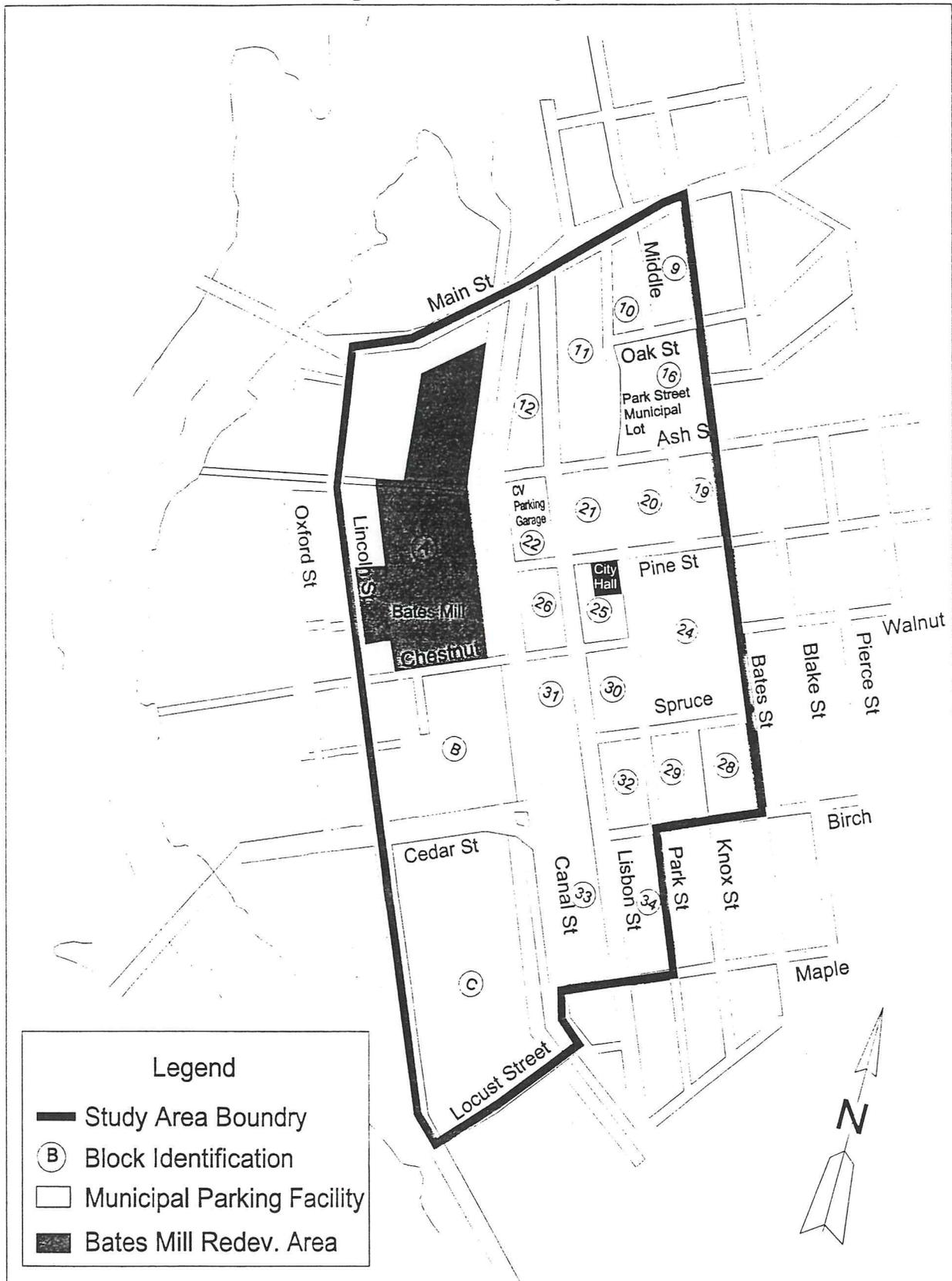
The continuing development of the Bates Mill as a major employment center, a proposed new convention center in Building 5 at the Bates Mill, a new district court house, riverfront and park improvements, increased office utilization and the desire for additional retail development all are causing people to be excited about the potential of the downtown. However, many are also concerned about the limits to this potential. The lack of sufficient supplies of adequate parking may be one of these limits.

Many have cited parking problems as a limit to the potential of development in Downtown Lewiston. Most recently, the Downtown Revitalization Forum, comprised of a group of individuals and organizations concerned with the future of the downtown area, identified problems and cited a number of short and long-term strategies for improving downtown. Parking improvements were prominent among the suggested strategies. The following is a summary of the ideas discussed and suggested by the group concerning parking:

- Improve lighting in the Parking Garage;
- Giving people incentives for parking and improving enforcement of parking laws;
- Parking was recognized as essential to the development of downtown;
- The number of existing parking places are not adequate;
- Redesigning of Lisbon Street- potentially with angled parking; and
- Eliminating parking meters.

These efforts to chart a direction for downtown will continue with the formation of a Downtown Renaissance Committee planned for the Summer of 1998.

Figure 1. Study Area



Study Area

The general area covered in this report is indicated in Figure 1. The study area is approximately 125 acres and comprises the core of Downtown Lewiston and several of the city's 19th and 20th Century mills. Main Street bounds the study area to the north, Bates Street to the east, Lincoln Street to the west and Locust, Maple and Birch Streets close out the south side of the study area. Individual blocks have been divided within the study area and are identified by numbers and letters, which are referred to elsewhere in this report.

While there are many interrelated parking issues and problems in Lewiston's downtown, this report divides them into two areas based on their geographic location and unique concerns. The first group are those problems in the traditional downtown, east of the Main Canal (adjacent to Canal Street). This area has a range of current and potential long-term parking problems related to the growth in employment and other activities, which have occurred and will continue to occur over time.

The other geographic area examined is the area west of the Main Canal, primarily the Bates Mill Enterprise Complex. The conversion of the multi-building Bates Mill complex into office, commercial and mixed-use space has attracted tenants that have over 600 daytime employees as well as a significant number of customers at retail businesses. Parking problems in this area are the result of the success of the mill in attracting additional tenants and have, to date, been managed by building additional on-site or nearby parking. These problems are primarily not on-street problems. However, available land for parking lots not requiring significant walking distances is being rapidly depleted.

Existing Conditions

Public Parking Supply

An inventory of existing public on-street and off-street parking was performed within the study area and is illustrated in Table 1. The study area is broken up into two sections. All numbered blocks will be referred to as being in "Section One" and all lettered blocks will be referred to as being in "Section Two". Figure 2 delineates these sub-areas. There are currently approximately 808 on-street parking spaces in the study area. Section One contains approximately 634 on-street spaces, and Section Two has approximately 174 on-street spaces. Approximately 475 of the on-street spaces are free, 200 are metered, and 130 require a special permit. The metered spaces have time limits from 15 minutes to 2 hours and charge \$0.25/ hour for the 1-hour and 2-hour limits and \$0.25 at the 15 minute limit meters. The generalized locations of these meters are shown in Figure 3. Approximately one half of the free spaces are unrestricted, the remainder have signed restrictions from 10 minutes to 2 hours.

Municipal parking facilities, including the surface lot on Park Street and the garage on Canal Street, were completed approximately 20 years ago. Originally designed to attract shoppers back to Lisbon Street, they have, over time, filled up with the cars of office employees and individuals doing business downtown at locations such as the District Court House. Some viewed the Centre Ville Parking Garage as a "white elephant" when it was built because it failed to substantially revitalize retail businesses on Lisbon Street and was perceived to be mostly empty for many of its 18 years. In the past several years, however, the garage has been occupied at up to 85% of its capacity and is considered to be essentially full. The Park Street parking lot is also essentially full. Approximately 35-40 parking spaces will be added to the lot as part of a planned expansion in the Summer of 1998.

Public off-street parking in the study area consists of the two surface lots on Park Street containing 343 spaces and 25 spaces included in Block 16, and the Centre Ville parking garage on Canal Street containing 360 spaces, which is in Block 22. The Park Street lot is attended until 6 p.m. on weekdays and charges \$0.25 per hour. A monthly permit costs \$30. This lot has been re-striped to include at least 30 additional spaces or approximately 400 total. In order to address a severe shortage of short-term parking near the Post Office and Victor News, a 25 space parking lot was sectioned from the main parking lot within the past few years. This lot has time restrictions of between 15 minutes and 1 hour and is not metered. The Centre Ville garage has approximately 360 spaces on 6 levels. Short-term restricted spots account for 30 of these and have been patrolled by a meter maid. This lot is attended through 6:00 p.m. and charges \$0.25 per hour. A monthly permit costs \$30.

Figure 2. Parking Sub-Areas

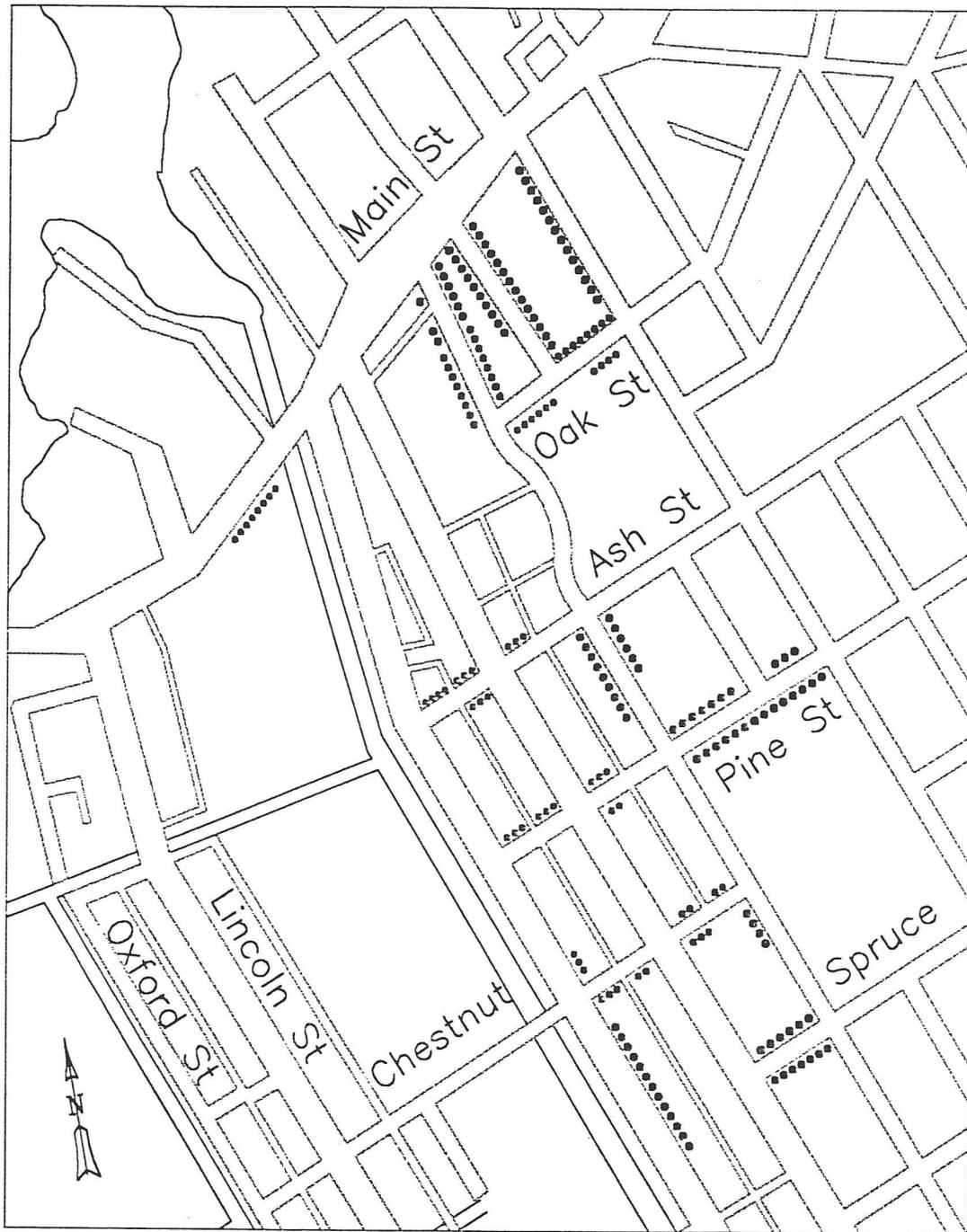


Table 1 - Parking Spaces by Type in Study Area²

Block	Free							Pay		Restricted		Total
	Un-restrict	10 minute	15 minute	30 minute	1 hr limit/ signed	2 hour limit/ signed	Off-Street (Bates)	Meter	Off-Street	HP	Special permit/ private	
11	2	-	3	6	22	-	-	14	-	-	-	47
21	-	-	5	-	9	-	-	10	-	-	-	24
20	-	-	3	-	-	4	-	13	-	-	-	20
12	9	-	-	5	17	-	-	7	-	-	-	38
10	-	-	1	2	-	-	-	25	-	-	-	28
25	-	2	-	6	7	-	-	7	-	2	6	30
16	15	-	-	-	-	-	-	10	368	1	-	394
22	-	-	-	-	5	-	-	9	360	-	-	374
30	4	-	-	4	5	-	-	13	-	1	-	27
19	-	-	-	-	-	12	-	3	-	-	-	15
9	-	-	-	5	-	-	-	34	-	-	-	39
24	15	-	-	6	-	24	-	14	-	-	62	121
31	-	-	-	-	21	-	-	16	-	-	-	37
26	3	-	-	-	7	-	-	8	-	-	-	18
32	7	-	-	-	7	-	-	7	-	-	-	21
28	27	-	-	-	-	-	-	-	-	-	30	57
29	6	-	-	-	-	-	-	-	-	-	-	6
34	20	-	-	-	-	15	-	-	-	-	-	35
33	25	-	-	-	6	-	-	-	-	-	-	31
A	20	-	-	-	30	-	198	8	-	-	32	383
B	27	-	-	-	-	7	106	-	-	-	-	140
C	22	-	-	-	-	28	-	-	-	-	-	50
Total	202	2	12	34	136	90	304	198	728	4	130	1840

In addition to this, parking lots developed for the Bates Mill include: 46 spaces in front of Mill Building 2, 51 spaces in front of Mill Building 1, 106 spaces at a lot on Chestnut Street, 90 spaces in front of the Peoples Heritage Bank building, and 11 spaces in back of Peoples Heritage. While these lots are publicly owned, access is effectively restricted to Bates Mill tenants and their clients and customers. The total number of spaces developed for the Bates Mill is 304. The total municipally controlled parking spaces in the downtown study area is 1,840.

² Municipal only, private parking facilities not included



LEGEND

- 15 minute time limit
- ⊙ 1 hour time limit
- ⊖ 2 hour time limit

FIGURE 3

Locations and Time Limits of
Parking Meters in Study Area

Public Parking Demand

On-street

Excess on-street parking demand is generally a good indicator of where additional on-street parking may be needed, but also for where supplies of public and private off-street parking is inadequate. In order to quantify parking demand in the study area, the number of parking violations distributed and returned paid by the City of Lewiston Police Department from January 1, 1996 to April 7, 1998 were studied. While this method for estimating current parking demand may be somewhat biased toward overestimating demand in heavily patrolled locations or if enforcement is inconsistent, it is a cost effective way to quantify relative utilization in areas with the highest demand for on-street parking spaces. One of the reasons some areas are patrolled more rigorously by the city's parking enforcement personnel is that these areas generally experience a higher number of violations. The violations are broken down into violations per block and further to violations per block face in Section 1. Block level estimates of violations include the Park and Ash Street short-term parking lot. Since observations indicated that the demand for on-street parking is much lower in Section 2, block by block estimates were not done in this area.

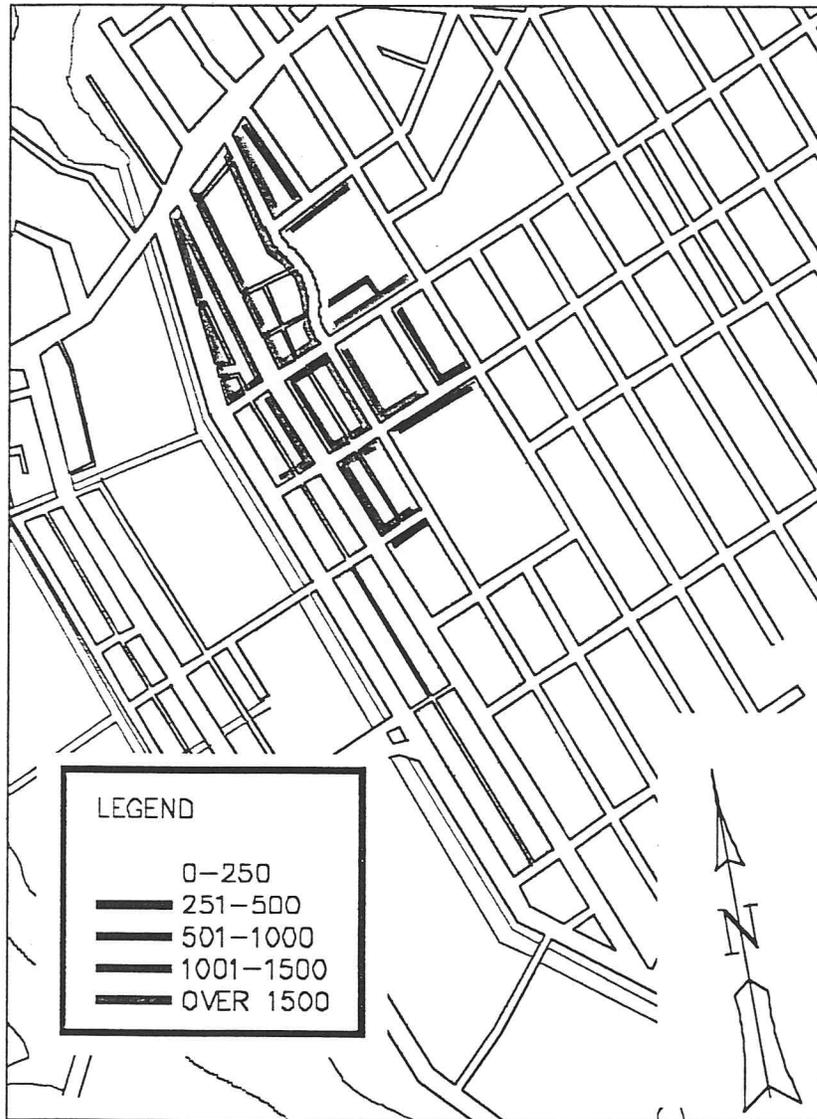
While observations indicate that the overall supply of on-street parking in the study area appears to be adequate, parking demand is not evenly distributed throughout the downtown. Figure 4 is a map of the study area illustrating the level of parking violations issued and returned paid on each block face. Table 2 includes the block numbers and the number of violations in each block issued and returned paid in the study period (1/1/96 to 4/7/98) as well as a column indicating the average ratio of violations per legal parking space on non-holiday weekdays. An explanation, by way of example, for this statistic may be necessary. Block 20, bounded by Park, Pine and Ash Streets, has a violation ratio of .333- the highest of all downtown blocks. In effect, one-third of the legal parking spaces on this block have vehicles receiving tickets every work day.

Much of downtown currently has an adequate supply of on-street and off-street private parking available. Streets with fewer than 250 violations in the 2+ year time period- shaded yellow in Figure 4 or with .05 or fewer violations per legal parking space per day are generally felt to have an adequate supply of parking. Observations of these areas bear this out, with unoccupied parking spaces usually available in these areas.

However, there clearly are areas of downtown that have parking problems. As can be seen in the table, the upper Lisbon Street and Park Street areas between Pine Street and Main Street (Blocks 20,21,11, and 22) have the highest number of parking violations per legal parking space. Park Street, from Main Street to Pine Street, has the highest number of total violations for any street. Not surprisingly, this is the area of Lewiston with the greatest density of land uses. Numerous attractions located close to this area include: the District Court, law firms, banks and other financial institutions, the Post Office, Library and City Hall, as well as, a number of other offices and retail establishments. The two municipal parking facilities do serve this area but are primarily used by those that are

parking all day because they work in the area. Virtually all of the on-street parking spaces in this area are metered or zoned for short-term parking only.

Figure 4.
 Number of Parking Violations Returned Paid
 Jan 1, 1996- April 7, 1998



Many have speculated that some relatively long-term parkers use some of these on-street spaces in this area for far longer than designated time limits. The high number of violations seems to corroborate this. Past studies have indicated that approximately one-half of all on-street parking in the area is less than 30 minutes, 35% is for 1 to 2 hours and the remaining 15% is for over 3 hours. However, these same studies indicate that the trend is for more and more of the on-street parking in most areas to be for longer time periods. The excessive number of over-time violations in some blocks, as many

as one parking ticket for every three parking spaces- *each day*, indicates that much of the actual parking activity is incompatible with the time limits designated for these spaces. Either the enforcement does not offer a sufficient deterrent to over-time parking, or the people parking in these spaces do not feel that they have a viable alternative to the spaces that they choose to park in. In the case of Downtown Lewiston, both of these are probably at least partly true. There are not enough free, long-term spaces immediately next to people's destination.

In order to examine the effect of enforcement, the violations were grouped into two separate categories, over-time parking and all other violations. There were almost 23,900 violations paid in the 28-month study period in Section 1 of the study area. This accounts for over 87% of all parking violations distributed and returned paid by the City in the study period.

Of the 23,900 violations paid in Section 1 of the study area, over 20,700 of those violations were for exceeding the posted time limit. This accounts for over 86% of the violations paid in Section 1. A large percentage of the violations in the study area are for "exceeding the time limit". This leads one to believe that many in the parking public disregard posted parking limitations. One reason for this may be that the fine imposed for overtime parking is only \$2. To park in a public pay lot or garage costs \$0.25 per hour, or \$2.50 for the day. It appears to be worth the chance of a modestly priced ticket for motorists to park where they would like and not obey the parking limits posted for that area. While parking demand appears to exceed the number of spaces available in parts of downtown, it is clear that any new on or off-street facilities would have to compete with the proximity and convenience advantage, as well as the relatively low cost, of parking illegally.

Table 2

Number of Violations/Block and Block Face
January 1, 1996- April 7, 1998

Block #	N Face		E Face		S Face		W Face		N Face		E Face		S Face		W Face		Block Total	WD Avg. Viol./Space			
	Exceed time	time	All other	Viol	All other	Viol	All other	Viol	All other	Viol			All other	Viol	total						
20	7	50	692	1585	139	2	351	261	146	52	1043	1846	3087	0.333							
21	394	1943	445	416	16	118	75	89	410	2061	520	505	3496	0.267							
11	126	2563	1031	1277	1	218	15	21	127	2781	1046	1298	5252	0.205							
22	6	557	685	0	27	24	17	0	33	581	702	0	1316	0.172							
10	0	319	107	1710	1	4	39	28	1	323	146	1738	2208	0.144							
12	0	1231	419	514	0	147	34	34	0	1378	453	548	2379	0.115							
25	473	5	348	99	73	102	17	359	546	107	365	458	1476	0.090							
19	0	77	298	238	0	10	3	42	0	87	301	280	668	0.082							
30	277	32	234	50	71	16	3	66	348	48	237	116	749	0.051							
16	435	0	844	2	15	1	51	20	450	1	895	22	1368	0.049							
26	2	127	25	0	4	72	15	1	6	199	40	1	246	0.025							
9	2	28	219	225	0	1	1	8	2	29	220	233	484	0.023							
32	180	0	0	16	3	0	5	15	183	0	5	31	219	0.019							
29	2	0	0	0	13	3	24	13	15	3	24	13	55	0.017							
31	96	42	2	2	10	154	2	1	106	196	4	3	309	0.015							
24	260	46	0	8	20	2	9	48	280	48	9	56	393	0.008							
28	0	0	0	0	54	1	35	1	54	1	35	1	91	0.003							
34	0	1	0	1	15	3	1	32	15	4	1	33	53	0.003							
33	0	1	0	0	0	12	1	6	0	13	1	6	20	0.001							

Total Violations in Study Area=

23869

* = Non-holiday weekday average number of violations per parking space

Off-street

Both the Park Street lot and the Canal Street garage are primarily used by monthly permit holders. On average, approximately 550 of the 728 spaces are taken up with the cars of monthly permit holders and approximately 70% of these are “packaged”, and often paid for, by an employer. Please see Table 3, which highlights the utilization of the two off-street facilities.

Table 3. Off-Street Parking Facilities

Facility	Monthly Permits	Average Hourly Parkers	Average Parkers ³	Capacity	Average Filled	Approx.. Total Theor. Rev./yr ⁴
Park Street Lot	315	15	280	368	76%	\$115,000
Centre Ville Garage	250+ 75 ⁵	25	320	360	88%	\$140,000
Municipal Lot Total	640	40	600	728	82%	\$250,000

The parking garage has approximately 250 permit holders per month. However, national averages suggest that approximately 5 to 10% of these are not using the lot to park on any given day. The parking garage collects approximately \$21,000 per year in hourly charges. This accounts for approximately 10 all day parking spaces but tends to be concentrated in the middle of the day between 10:00 a.m. and 2:00 p.m. Accounting for day to day fluctuations in hourly parking, mid-day parking demand at the garage is estimated to routinely exceed 250 spaces with many of the vacant spaces on the roof of the garage. The planned absorption of 75 parking spaces for the employees of Bates Mill tenants, along with the reduction of 15-20 City of Lewiston employees that are moving to the Park Street lot, will bring this number to over 300. This is approximately 85% of capacity. As discussed earlier, utilization rates greater than 85% result in conditions that are over practical capacity because, on a given day or during inclement weather, they may actually be full.

The Park Street lot has approximately 300 monthly permit holders and receives about \$10,000 in annual revenue from hourly parkers. As with the garage, most of the hourly parking is in the middle of the day, but the lot experiences much greater day to day variation in demand. These fluctuations in demand seem to correlate with the docket at the District Court. Accounting for normal daily fluctuation, as well as the addition of 15 to 20 City of Lewiston employees, results in the parking lot demand at greater than 80% of capacity. During significant court activity, the utilization will be considerably higher, exceeding the effective capacity of the lot. However, the planned re-striping of the lot

³ The total of monthly permit holders and average hourly parkers

⁴ Approximate. Includes theoretical monthly permit revenue for permit holders of \$30/month. Because the City subsidizes some of these (City employees etc.), actual revenue is less

⁵ Assumes Telemark employee assignment to garage

with an additional 35 spaces should result in enough additional capacity to handle current demand which should fall at approximately 75% of capacity.

At the Bates Mill, current utilization of the parking lots often exceeds the actual supply of parking and is consistently greater than the 85% practical capacity cited earlier. Furthermore, as major tenants plan to increase their staffing levels, overall parking demand will increase to easily take up the capacity of the Lincoln Street lot that is currently under construction.

Table 4. Current Bates Mill Parking Demand⁶

Mill	Leased Work Sq ft Day Jobs	Available Square Feet	% Rented	Tenant Employee Parking Allocation	Estimate of Peak Total Demand Spaces	Supply of Spaces	Percent of Peak Capacity	
1	17,831	45	150,200	12%		120	51	N/A ⁷
2	59,934	218	171,500	35%	178 ⁸	200	227	115% ⁹
3	3,304	3	161,200	2%		2	11	18%
5	175,000	108	352,300	50%	108 ¹⁰	108	108	100%
7	48,000	260	48,000	100%	200	208	196	106%
ex bld	1,402	11	4,350	32%		9		N/A ¹¹
Total	305,471	645	887,550	34%	378	540	485	111%

Table 4 summarizes the result of a parking generation analysis using rates from the Institute of Transportation Engineers 1987 Parking Generation Manual- 2nd Edition. These estimates were developed from square footage and employment levels at the mix of businesses found at the Bates Mill. This analysis also assumes parking space construction and employment levels expected in the Fall of 1998. Some businesses, such as retail and restaurant, tend to generate considerably more peak parking demand than employment and are evaluated using square footage estimates. Other businesses, such as office operations, actually generate slightly less parking space demand than the number of employees. This is particularly relevant for Mill Buildings 1 and 2, which front on the

⁶ This table assumes employment levels and lot construction estimated for September 1998.

⁷ This figure summarizes Mill 1 and 2 as well as the executive building which share the same two lots.

⁸ Includes parking lots in front of both buildings 1 and 2 and at the Centre Ville garage.

⁹ This figure summarizes Mill 1 and 2 as well as the executive building which share the same two lots.

¹⁰ Globtex- Bates of Maine currently operates a manufacturing facility in Mill 5, spaces at this location were not evaluated but are assumed to be adequate.

¹¹ This figure summarizes Mill 1 and 2 as well as the executive building which share the same two lots.

Main Canal and have a wide range of business types located within them. Also included in this table is the number of parking spaces assigned to tenants.

Only two of the lots have more than a handful of spaces available after tenant assignments are accounted for. The lots in front of Buildings 1 and 2 have 19 spaces available. However, many of these are used by customers of the various retail businesses and are not practically available to employees. The Chestnut Street lot will have approximately 21 spaces available beyond the spaces assigned to tenants following construction of the Lincoln Street lot.

Based on these figures, it seems that Buildings 1 and 2 have the most substantial current parking problem at the mill complex. The two lots in front of the building are small (total of 97 spaces) and awkwardly laid out, sometimes requiring vehicles to execute long back-out maneuvers when parking spaces are unavailable. Furthermore, while the retail businesses at the Mill depend on attracting customers with reasonably convenient parking, many of the parking spaces are already taken up by tenant employees- including their own.

The total peak parking demand at the Mill is expected to be 540 spaces. Of the lots on or adjacent to the Bates Mill site, there are approximately 410 spaces existing or under construction. This amounts to an apparent 25% over capacity problem. As mentioned earlier, 75 spaces in the Centre Ville garage have been allocated to Bates Mill tenants. When these are considered, the anticipated parking demand will still be 111% of the expected capacity of 485 spaces. There is also some on-street parking available, particularly on Canal Street. By allocating these spaces, the Bates parking lots, as a group, are still over practical capacity levels with over 100% theoretical utilization. It should be noted, however, that these demand estimates are based on employment levels of Bates Mill tenants. Considering that two of the major tenants have not yet fully occupied their space and parking needs of retail businesses vary widely, the actual utilization will likely differ from this estimate.

Future Parking Demand

As with any analysis that involves forecasting future events, estimating the future demand for parking in any area is difficult to do with any degree of reliability. Future parking demand is entirely dependent on the success of Downtown Lewiston in attracting new businesses and other activities in the coming years. Furthermore, with the exception of the Bates Mill Redevelopment Area, no reliable estimates exist for current employment levels and vacancy rates for the downtown. Without knowing the current relationship between employment, vacancy levels and parking demand, the effect of future development on future parking demand is much more difficult to predict. This deficiency is expected to be addressed as part of the Downtown Renaissance Committee effort.

East of the Main Canal

East of the Main Canal, recent trends indicate that growth in some activities and decline in other activities continues at the same time. Most of the larger retail businesses have left the downtown area, but professional offices, retail businesses and restaurants catering to downtown workers and nearby residents have increased in number. An inventory of Lisbon Street building occupancy indicates that law firms, retail/pawn and convenience stores, and banking /finance/real estate have been growing the fastest in the past five years. Many of the offices occupy upper floors of the downtown buildings and are not necessarily noticed at the ground level. However, the retail and office vacancy rate on upper Lisbon Street remains quite high.

While no fully reliable estimates of vacancy rates are available, some have claimed that the current retail and office vacancy rate for upper Lisbon Street, between Chestnut and Main Street, approaches one-third to one-half of all space. Full occupancy of these buildings could cause a significant increase in parking demand in this area. Based on information provided by the City of Lewiston, the total area of buildings located on Lisbon Street from Chestnut to Main Street is approximately 375,000 square feet. If these buildings were fully occupied (an additional 1/3 or 124,000 square feet of total building area) with businesses employing workers in office occupations, the parking demand in this area would increase by approximately 350 spaces.¹² Another parking facility, equivalent in size to either of the two existing municipal facilities, would need to be constructed to accommodate this growth.

In order to develop an estimate of future demand for parking in the core downtown area that is as realistic as possible, LACTS has identified expected development trends and specific planned developments. A brief list of these follows:

- **Downtown will continue to convert retail to service and office uses.** This trend is quite typical for the downtowns of small cities in most of the U.S., as major retailing

¹² The ITE Parking Generation Manual estimates office building parking demand generation at 2.79 spaces per 1000 square feet of total building area.

relocates to shopping malls along major arterials. What this will mean for parking demand is difficult to predict. However, office and service uses have somewhat lower turnover rates and account for more longer term parking. It is likely that this will cause long-term parking to be a greater percentage of overall peak demand.

- **The type of retail businesses locating downtown will continue to change.** The new uses depend more on downtown workers and the attractiveness of the whole downtown for their business. At the same time, a separate vehicle trip to a downtown retail establishment will be less likely. The trip to the store or restaurant will not necessarily involve additional parking utilization, because the customer will already be parked downtown.
- **Downtown will continue (and increase) its role as the center of city and regional services.** Plans call for a new District Court House in this area. While the current Court House is already located here, a new facility will make it more attractive for other offices and businesses that depend on it to locate nearby.
- **Bates Mill development plans will make all of downtown more attractive.** Many involved in the Bates Mill development hope that success at the Bates Mill will have a ripple effect on the Lisbon Street corridor. However, any increase in business activity is not likely to significantly increase the demand for parking spaces in the area. Most Bates Mill employees and convention attendees would not find it very convenient to use their vehicles to drive a few blocks to park in the upper Lisbon Street area. However, if parking at the mill is insufficient to accommodate all on-site demand, the impact on Lisbon Street corridor parking could be very significant.

Assuming that the Bates Mill development has sufficient parking, demand in the downtown east of the Main Canal would likely grow at a rate somewhat lower than the rate of employment growth in the area. Although it depends on the type of new development, new parking demand is expected at 75% to 80% of new employment. In other words, 100 new employees would generate an additional parking demand of 75 to 80 spaces. New or redeveloped office space, if fully occupied, is likely to generate parking demand of between 2.5 and 3 spaces per 1000 gross square feet of building area. Approximately 60% of this growth in demand would likely be for intermediate and long-term parking.¹³

Based on current plans, much of the expected new development is in the area of the downtown that already has a parking shortage. While planned developments like the new district court will likely build sufficient parking to accommodate their own increases in demand, the ripple effect of associated development will have to be absorbed in the overall supply of parking.

¹³ Source: ITE Parking Generation Manual- 2nd edition

West of the Main Canal

Projections for future public parking demand to the west of the Main Canal depend on how plans for the Bates Mill Enterprise Complex proceed. One might expect that if the Bates Mill is successful, other mills in Blocks A, B and C would develop similarly. With over 8 million square feet of floor area in Lewiston's mills, even a small fraction developed at similar densities to recent Bates Mill renovations, would create a huge demand for parking. In fact, if plans for just the Bates Mill were fully realized, the overall parking demand in the downtown study could more than double. Providing sufficient parking supply for this large an increase would be difficult. Based on an estimate of 90 parking spaces per acre, the build-out parking space demand would require over 40 acres in surface parking. It is apparent that there is not sufficient land at, or adjacent to, the Bates Mill to build this parking. In fact, the entire Bates Mill site is only 10 acres.

Table 5 includes estimates for future parking demand in the Bates Mill area assuming that the facilities are fully occupied. These figures rely on the Bates Mill Master Plan which outlines the types of tenants expected to occupy each building. It is unlikely that the Mill will be 100% occupied at any one time. Tenants, particularly the smaller ones, will be moving in and out as leases expire, etc. It is also likely that full occupancy will not occur immediately and may take as long as 20 years to fully occupy the space. New parking facility construction would likely occur at the same rate that mill space is rented.

The estimates of future demand also assume similar mixes of tenants as those currently found in Buildings 1 and 2 but with most of the remaining space rented by office uses. If this mix changes significantly, parking demand would change as well. Some tenants will require considerably more parking per square foot and some will require less. Of the tenants currently occupying Mills 1 and 2, the number of gross leasable area square feet varies from a low of 46 per employee to a high of 1700 per employee¹⁴. If all new employment averaged toward the high or the low end of this range, parking demand estimates would change significantly.

In considering this expected need for additional parking, particularly with increased demand at the Bates Mill, city officials have tentatively identified a number of potential locations for new parking facilities. The location of several parking structures have been identified, including the decking of the lot in front of the People's Heritage building (80 additional spaces) and garages on Canal Street at the Kingfield Bank (350 spaces) and replacing the Chestnut lot with a garage (up to 700 additional spaces). When combined with the 485 existing spaces at just the Bates Mill to total 1553, this still will not satisfy build-out levels of development. This additional demand (approximately 900 spaces) would have to be accommodated in other ways.

¹⁴ The average square feet of GLA per employee is about 400 in building 1 and 275 in building 2.

Table 5.
Bates Mill Redevelopment Area- Future Parking Demand

Mill	Available Square Feet	% Rented	Current Estimate of Peak Total Demand (Spaces)	Current Supply (Spaces)	<i>Est. Build Out (100% leased) Demand (Spaces)</i> ¹⁵	Estimate Comments	Future Parking Space Deficit
1	150,200	12%	120	51	595	Assumes remainder of building filled with office uses at current emp/sq. ft.	-544
2	171,500	35%	200	152 ¹⁶	573	Assumes that remainder of building leased to tenants comparable to the current mix - including emp/sq. ft.	-421
3	161,200	2%	2	11	539	Assumes office employment- same density as Building 2	-528
5	352,300	50%	N/A	N/A	1178 ¹⁷	Assumes office employment at the same density as Building 2	-1178
7	48,000	100%	208	196	248	Assumed to remain at current employment levels	-52
ex bld	4,350	32%	9	N/A	27	Assumes office employment at the same density as Building 2	--27
1 Wing	43,920	0%	0	0	147	Assumes office employment at the same density as Building 2	-147
2 Wing	38,265	0%	0	0	128	Assumes office employment at the same density as Building 2	-128
4	18,496	0%	0	0	62	Assumes office employment at the same density as Building 2	-62
6	53,400	0%	0	0	179	Assumes office employment at the same density as Building 2	-179
Total	1,041,631	29%	540	410	3688		-3226

¹⁵ Figures in this column generally assume that future development mirrors the mix of current tenants and at employment densities similar to those of current tenants. It assumes that the great majority of space will be for "office" use. Changing this assumption would have a significant affect on the estimate for parking demand.

¹⁶ Excludes Canal Street Garage - 75 spaces for a Bates Mill tenant

¹⁷ If this space is developed as a convention center, 608 parking spaces are expected to be needed based on equivalent facilities with maximum event sizes as defined in Bates Mill Master Plan

Recommendations

Recommendations for improvements to the study area parking system are divided into three categories. Immediate and low cost recommendations can be implemented in the next several months, require little capital or other costs to the City other than the staff time required to implement them. Short-term recommendations, while anticipated to require somewhat higher expenditures, can generally be implemented within the next year. Intermediate-term improvements often require fairly significant capital expenditures and can be implemented in the 1- 5 year time horizon. Long-term, or greater than 5 year horizon, recommendations are less detailed but may require significant capital expenditures or policy changes. Figure 5 is a map delineating the location of many of the recommendations.

Short-Term & Immediate/ Low Cost Recommendations

One of the over-riding recommendations is to discourage long-term use (>4 hours) of on-street parking. On-street parking is a relatively finite resource that needs to be managed with specific policies, enforcement and adequate supplies of off-street parking available. Many of the near-term recommendations hope to achieve this objective.

Parking Facility and On-Street Parking Expansion

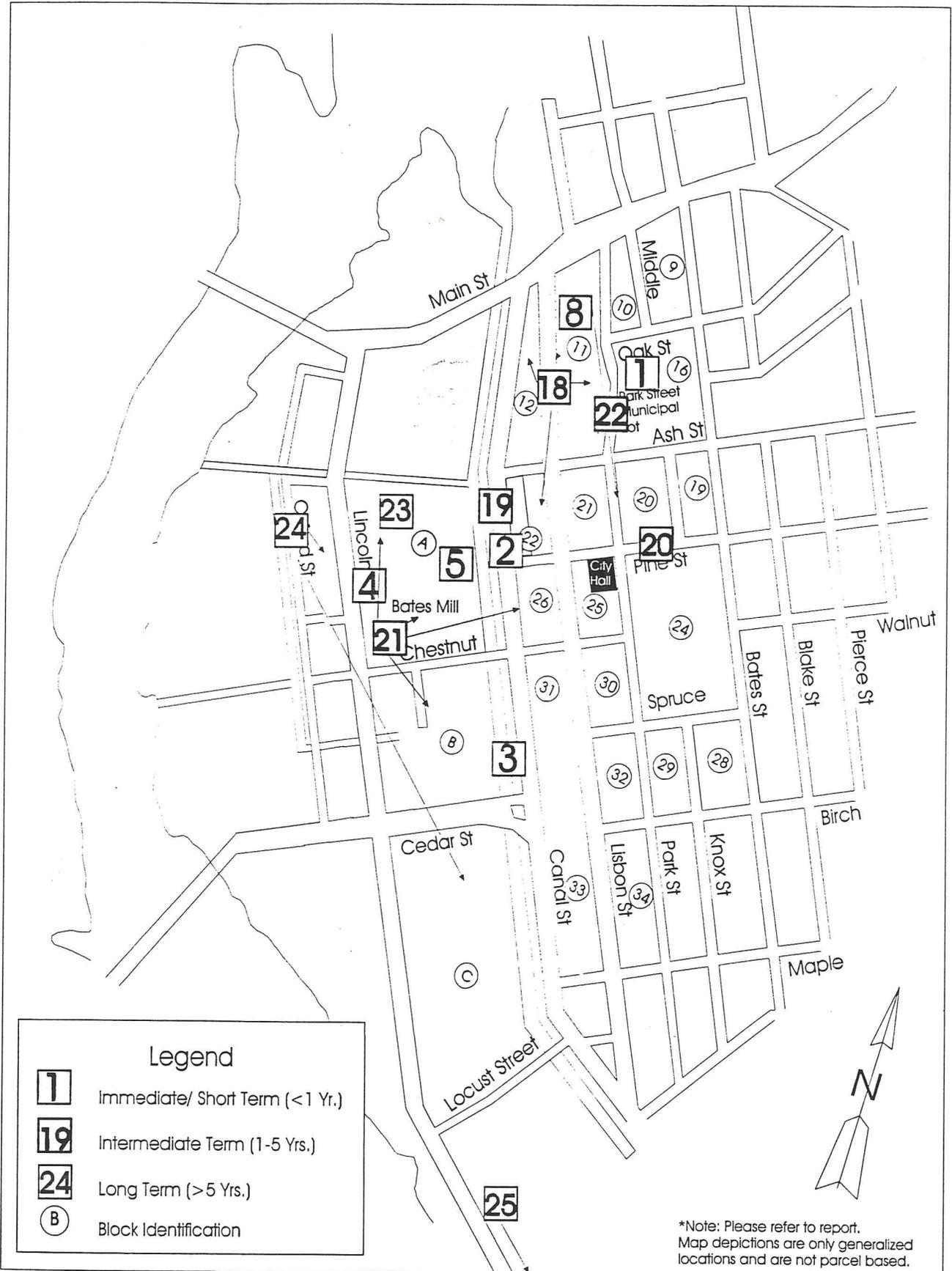
1. **Completed re-stripping of the Park Street municipal lot with an additional 30 spaces.** The interplay between short-term parking and long-term parking is important. Many of the recommendations work to improve the availability of short-term parking by encouraging long-term parkers to seek off-street parking facilities. It is important that there be an adequate supply of intermediate and long-term parking for these individuals.

Immediate- Adds to long-term parking supply with 30 spaces.

2. **Allow on-street parking on west face of the Centre Ville Parking Garage on Canal Street beyond the garage entrance.** This prohibition appears to have been created in order to preserve sight lines for vehicles exiting the garage. However, this is unnecessary because Canal Street is one-way. These 3 +/- spaces should initially be restricted to one-hour time limits, comparable to other Canal Street locations. In the longer term, parking meters should be considered for spaces with one or more hour restrictions in this location.

Immediate- Adds to short-term parking supply with 3 spaces.

Figure 5. General Location of Recommendations



3. **Eliminate unrestricted free parking on Canal Street from Ash Street to Chestnut Street.** Replace these 27 spaces with 2 hour restricted parking increasing the total number of 1 and 2 hour restricted spaces in the study area to 253. Generally, in high demand downtown area locations, on-street parking should be restricted and, preferably, metered. This type of parking is often the most convenient available, and should be preserved for clients and customers of adjacent and nearby businesses. The users of these spaces typically only need a short time (less than 2 hours). If downtown workers use these spaces for the whole work day, they are unavailable. In the longer term, parking meters should be considered for this location if the restriction remains at 1 hour or more. Long-term parkers displaced by this change should be able to find adequate parking in the Centre Ville garage or other off-street lots which have some additional capacity. This construction was completed by the City in the Fall of 1998.
Immediate- Adds to short-term parking supply with 27 spaces. Removes 27 spaces from long-term parking supply.

4. **Complete the construction of the Lincoln Street lot at the Bates Mill Enterprise Complex.** The current lack of employee parking spaces at the Mill has caused numerous problems. As previously mentioned, even with the addition of this lot, there still will be a shortage of parking at the Mill site.
Immediate- Adds to long-term parking supply with 95 spaces.

5. **Parking spaces in front of Bates Mill Buildings 1 and 2 should be restricted by 2-hour time limits.** This should discourage downtown and Bates Mill workers from parking all day in spaces necessary for clients, visitors and customers of retail and other businesses in these buildings. Long-term parkers displaced by this change should be able to find adequate parking in the Centre Ville garage or other off-street lots which have some additional capacity.
Immediate- Adds to short-term parking supply with 97 spaces. Removes 97 spaces from long-term parking supply.

Regulation and Enforcement

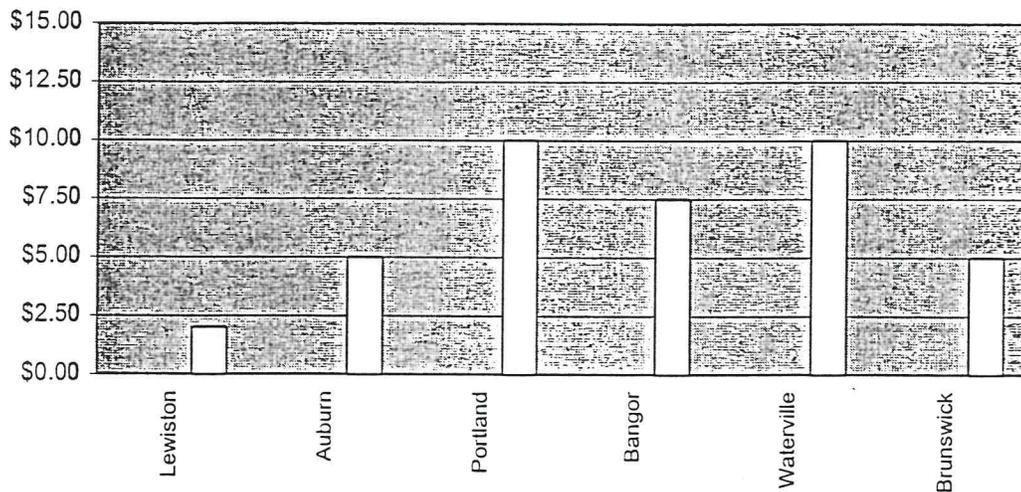
Parking regulations and restrictions are an inevitable part of managing downtown on-street parking demand. On-street spaces, particularly in highly utilized areas, need to be retained for short and intermediate-term parkers. Long-term parkers (>2 hours) should be parking at off-street facilities.

6. **Retain existing parking meters in highly utilized locations.** In addition, consider the limited installation of meters in other highly utilized locations. The parking meters bring in about \$40,000 in revenue and clearly indicate when a violation occurs making enforcement of overtime regulations easier for Lewiston Police Department employees.
Immediate- Maintains existing short-term parking supply.

7. **The overtime parking fee should be increased from the current \$2 to \$5, or even \$10.** As can be seen in the chart below, Lewiston has the lowest overtime parking fee of cities in Maine. A survey of over a dozen other cities in North America shows that overtime fees range to as high as \$25. Only one city, Lubbock Texas, had overtime fees as low as Lewiston's. Increasing the fee should help free up short-term parking in the most congested areas by making the parking penalty more meaningful to frequent violators and increase fine revenue. It is important to consider "packaging" this with other options in order to lessen the apparent impact. This could include increasing off-street parking supply along with policy changes (see recommendations 10, 15, 16, and 17) at the same time as implementing this recommendation.

Immediate- Maintains and improves the availability of existing short-term parking supply.

Overtime Parking Fines, Various Maine Cities



8. **In the highest demand areas such as Lisbon Street and Park Street, free on-street parking spaces should be limited to 15 minutes.** Metered locations with one or two hour limits could be located close by. This would allow intermediate-term parkers the opportunity to park in some of these areas, while still freeing up some spaces. The specific locations should be determined with further study considering the particular types of retail and other businesses.

Short-term- Improves availability of short-term parking supply.

9. **Implement changes in the City's Scofflaw Ordinance.** The current ordinance defines a scofflaw as a person with more than \$50 in tickets or four or more tickets issued in a thirty day period. This definition makes the task of compiling a scofflaw list a difficult task. The ordinance should be changed to read "4 or more tickets that are unpaid within 30 days of issuance."

Immediate- Maintains and improves the availability of existing short-term parking supply and increases parking fine revenue.

10. **Offer a no charge option or "forgiveness ticket" for first time offenders of overtime parking only.** This system is used in Portland and other cities in order to discourage habitual offenders but not discourage people from parking.

Immediate-Improves the availability of existing short-term parking supply.

11. **Adopt a graduated fine schedule for repeat offenders and non-paying violators.** Increasing late fees over the current \$6 late payment fee should discourage habitual offenders. Increased fees for late payments would pay for the increased costs associated with a collection agency. Please note that according to the Lewiston Police Department this recommendation would be difficult to implement.

Immediate- Improves the availability of existing short-term parking supply.

12. **Change time duration of specific parking areas to better reflect desired turnover rates.** The highest demand on-street parking locations, particularly those in areas with considerable retail activity, should have the shortest time limit. The specific locations should be determined with further study considering the particular types of retail and other businesses.

Immediate- Improves the availability of existing short-term parking supply.

13. **Establish and enforce Bates Mill Enterprise Complex permit policy.** Establish a policy that allocates a predetermined number of permits to each tenant. The Chestnut Street, Mill 7 and Lincoln Street lots should be patrolled to identify offenders, notifying those with a first time offence and towing repeat offenders.

Immediate- Improves the availability of existing long-term parking supply.

14. **Increase patrol of "problem areas".** Increased revenues from parking fines, as discussed in Recommendation 7, should make this possible.

Short-term- Improves the availability of existing short-term parking supply.

Improve Public Understanding of Parking Available (Marketing)

15. **Encourage merchants to participate in full/partial parking validation for shoppers using public garage or lot.** This should encourage those planning to spend longer than 1 hour, such as those eating at a restaurant, to use off-street parking. This frees up on-street parking for shorter duration parkers.

Short-term- Improves the availability of existing short-term parking supply. The cost of this to the City could be minimal with costs shared with merchants.

16. **Create a map of available parking supply in the downtown area describing type/duration of parking.** Anecdotal evidence suggests that misunderstandings about the availability and policies at the two off-street municipal parking facilities causes people to park on the street. A hand card including this map could be distributed to parking violators along with their ticket. Please see the example in Appendix II.

Short-term- Improves the availability of existing short-term parking supply.

17. **Administer a survey of people parking downtown in order to better understand why they are parking where they are.** What constitutes a viable alternative to parking illegally varies by the individual and by the situation. Like other travel decisions, how close to a destination one chooses to park generally comes down to three considerations: maximizing convenience, minimizing cost and minimizing time. Some individuals are willing to walk a little further to park their car in a safe, convenient and affordable parking lot. By understanding who is parking where in the downtown, better estimates can be made of the impact of specific changes in parking supply and regulation.

Short-term- Improves the understanding of downtown parkers in order to identify changes to parking policies and facilities. This is a further study that LACTS could undertake over the coming months.

Intermediate Term Recommendations (1-5 years)

When considering the range of mid-term improvements, it should be recognized that they should be implemented over time at a rate consistent with the rate of other changes in this area.

Construct New and Expanded Parking Facilities

18. **Identify the location and construct 1 to 3 small parking lots accessible from Lisbon Street.** At least one of these should be in the section of Lisbon Street between Chestnut Street and Main Street. The construction of these lots will likely require the acquisition at least 3 existing buildings in order to assemble an adequately sized parcel for 25 or more spaces. A lot constructed on the West side of Lisbon Street have the traffic flow advantage of also accessing Canal Street. Because of the difference in grade, provision should be given to eventually building a deck accessible at grade to Lisbon Street. Construction of these lots would facilitate the elimination of long-term on-street parking discussed in the section on short-term recommendations.

Increases the supply of long-term and intermediate-term (1-4 hours) parking by 25 to 100 spaces. Surface parking lot construction, including costs of land acquisition and demolition of existing structures (these are substantial), costs approximately \$6,000 per space- (\$150,000-\$600,000)

19. **Evaluate the feasibility of constructing a two level (120 space) addition to the Canal Street garage.** This facility was originally designed to have two additional decks installed at a later date. An engineering evaluation and estimate for doing this has not been completed, and there are some disadvantages to having a lot with six levels.

Increases the supply of long-term parking by 120 spaces. Estimated cost \$1,200,000.

20. **Construct short/intermediate-term on-street angle parking on the north face of Kennedy Park on Pine Street.** Although the City does not control the land that the park sits on, this option should be considered. Assuming that a 45% angle is used, approximately 16 feet of street and sidewalk space would be needed for these spaces.

Increases the supply of short-term parking by 20 spaces. Estimated cost-\$50,000.

21. **Construct new parking in the downtown commensurate with the rate of development of the downtown.** City officials have identified four facilities with between 80 additional spaces and 1000 spaces. Several smaller surface lots on the site are also identified. Because of the level of shortage of on site Bates Mill parking, the city should consider building at least one of the larger facilities within the next 2 years.

Increases the supply of long-term parking by up to 1,500 spaces. Estimated cost-\$300,000- \$16,600,000.

	New Parking Facility	Spaces	Cost (including land and demolition)
1	2 nd Lincoln Street surface 1 Lot- north of lot currently under construction	85	\$500,000
2	Mill 7 parking deck on top of current lot	80	\$800,000
3	Parking garage at Kingfield Bank location on Canal Street	350	\$4,200,000
4	Chestnut/Lincoln Street garage in place of current surface lot and including several adjacent parcels	900	\$10,800,000
5	Surface lot on Lincoln and Chestnut to Canal #2	100	\$600,000
Surface	Other on-site surface lots	50	\$300,000

22. **Construct a parking structure as part of the construction of the new State District Court appropriate in size for current court activities, as well as expected increases in those activities over time.** The construction of a district court or any other governmental facilities in the downtown should be the time that a new garage is constructed. There is not adequate land to construct additional surface parking at most of the locations that have been discussed as sites for this facility.

facility.

Increases the supply of long-term and intermediate-term parking by up to 400 spaces. Estimated cost-\$4,800,000.

Long-term Recommendations (> 5 years)

23. **Construct a new on-site or adjacent parking structure (or structures) at the Bates Mill Enterprise Complex.** The need for this facility should be based on the rates of development at the Bates Mill. Any garage constructed should generally park at least 500 cars.
Increases the supply of long-term parking by 500 or more spaces. Current estimates of the costs of parking structures currently range from \$4,500 per space to \$15,000 exclusive of land costs.
24. **Construct other surface parking lots adjacent to the Bates Mill site toward the river and on the periphery of downtown.** There is currently some vacant or under-utilized land in these locations. Plans for these lots should be integrated with plans for the Lewiston river-front and the Railroad Park improvements.
Increases the supply of long-term and intermediate-term parking. Current estimates of the costs of surface parking lots are \$1,500 per space for construction and considerably more for site work and land acquisition.
25. **Construct satellite surface parking lots with convenient access to the Maine Turnpike and with transit shuttle service to the downtown and the Bates Mill Enterprise Complex.** As the Mill areas and downtown develop, the City should consider improving access to downtown via Lincoln Street. Satellite parking lots could be integrated into these plans.
Increases the supply of long-term and intermediate-term parking. Current estimates of the costs of surface parking lots are \$1,500 per space for construction and considerably more for site work and land acquisition
26. **Increase the share of non-single occupant vehicle (SOV) travel modes for work and other trips to Downtown Lewiston.** The lack of cheap, nearby parking is generally the greatest incentive for using transit, car-pooling and walking to work. For example, Bath has the highest percentage of work trips by transit and car-pool in Maine, because of its tight parking supply, particularly for Bath Iron Works employees. In addition, there are considerable tax incentives for carpooling and transit. The IRS now treats transit and carpool subsidies similarly to parking subsidies with no tax applied for up to the full cost of the service. It is unlikely that parking costs will discourage downtown employees from driving alone to work in the near term. However, as development densities increase, parking costs paid by the employee will also rise and encourage the use of alternatives to the SOV.

Parking facilities are expensive to construct and maintain. If all of these recommendations were implemented, it would add over 4,200 parking spaces to and cost over \$33 million to construct. According to the International Parking Institute, new parking garages cost between \$4,500 and \$15,000 per space to build (depending on the type of construction, special features, etc.). Although it depends on borrowing costs, paying off just the debt in building a garage would require at least \$70 a month parking fee in order to break-even.

Maintenance costs should also be included in assessing the cost of parking. To light a parking garage, keep it clean, pay the people who work there, run the elevators, operate the cash registers and gate equipment, shovel the snow, etc. generally averages about \$650 per year per space. Depending on design specifics, surface parking requires approximately one acre of land for every 75-100 usable parking spaces and costs approximately \$1,500 per space to build. If the land is not currently owned by the City, acquisition and relocation costs also need to be added. The surface lot recently constructed on Lincoln Street cost the City over \$6,000 per space, when all costs are included.

Generally, funding new parking facilities should be looked at as part of the cost of developing in the downtown. The activity that these spaces support should justify the construction of the spaces, regardless of how the parking facilities are actually paid for. However, the "spillover" benefit to private businesses when building a public parking facility for a particular activity, such as a new district court, should be considered.

Parking facility construction is generally not eligible for federal transportation funds. However, it is eligible to receive federal and state economic development assistance including Community Development Block Grant program funds and under the empowerment zone grant that the city is seeking. The current market rate for parking in the study area has been \$30/month and \$0.25/hour as defined by the rates at the two city parking facilities. As the downtown develops and the demand for parking increases, so too will the value and the market rate of that parking. Users, including both employers and individuals, should expect that these rates will rise in order to fund a portion of new public parking facility construction. As it has in other cities, increased market rates may encourage private parking facilities to be developed in order to capture some of this increased value. However, in the foreseeable future, only paved and unpaved surface lots could justify the construction and operating costs paid for by user fees alone.