

Block #	Defining Streets	Total spaces avail	Spaces used off-street	Spaces used on-street	Total spaces Used	Off-street % occp.	On-street %occp.	Total %occp.
1	Parkside to Hayes	121	70	1	71	61%	14%	59%
2	Hayes to Pearl	94	45	5	50	56%	36%	53%
3	Pearl to Lovering	43	18	2	20	51%	25%	47%
4	Lovering to Pleasant	119	45	13	58	46%	62%	49%
5	Pleasant to Whipple	203	90	13	103	55%	34%	51%
6	Whipple to Seamans	239	74	36	110	40%	69%	46%
7	Seamans to Colby E. Entrance	109	21	51	72	75%	63%	66%
TOTAL		928	363	121	484			

Source: UVLSRPC Occupancy Counts, September 2004

Parking problems are often a matter of perception-if you can't find a parking space in front of your destination, there's a problem. In the case of handicapped individuals, this problem is more a reality than perception. Most handicap parking is provided in off-street parking lots; in fact only 3 on-street spaces exist, all near the police station on Seamans Road. The highest total occupancy observed for handicap spaces was 32%. The highest demand for these spaces is at Woodcrest, Village Green, and the Council on Aging. Although there appears to be an adequate number of handicap spaces, additional on-street handicap parking may be worth investigating in the areas between Peal and Lovering Streets.

A parking occupancy inventory can estimate total parking demand for an entire downtown but it cannot estimate parking demand by block or small areas. This is because high occupancies may discourage parkers who would otherwise come and park if the space existed. To determine demand at a block level, parking demand estimates were prepared to help assess potential parking needs.

Parking Usage and Local Parking Standards

Parking demand is generated by the activities and facilities in the area. A direct relationship between building use and the parking demand it generates has been established in many studies over the years. A parking model was created as part of this study to help estimate parking demand by smaller areas of the downtown and give a general idea of how many patrons are attracted to park in the downtown. This is a more accurate way to predict parking usage on a block-by-block basis, because in situations when parking availability is limited, patrons may be discouraged from shopping in town and go elsewhere. This is the primary parking complaint of businesses, that is, there is demand for their good/services, however, no parking to support the patrons. While our occupancy counts show relatively low occupancy rates and indicate it is unlikely unmet demand exists, this approach will provide another comparison to help evaluate parking usage and the adequacy of local parking requirements.

The parking demand for the New London Downtown has been calculated by multiplying the square feet of building space by a "demand ratio" which is the number of spaces required per 1,000 square feet of generating land use such as restaurants, retail, office, etc. The ratios represent a busy day in a peak month, rather than a once a year peak since it would be improbable to expect every tenant and every use in the study area to have peak activity on the same day. Similarly, local parking requirements from New London's Site Plan Review regulations were applied to these same establishments for comparison.

Land use information was gathered and compiled for every building in the study area (see Map 2). The town tax records provided square footage information. Review of site plans gave us the type of use and the breakdown of uses within a building in terms of the square footage occupied. A total of 257,848 square feet of "livable" floor area was identified. To be conservative, no vacancy rate was applied to any of the uses.

These factors are not calibrated to local conditions or supported by local survey/interview and as such can only provide a general sense of parking demand.

Table 4: Comparison of Total Parking Usage and Required Parking Spaces by Block

Block #	Defining Streets	Total spaces available	Total spaces Occupied	Parking Demand Est.	Spaces required by local Regulation	Occupancy as % of Parking Required by Regulation
1	Parkside to Hayes	121	71	114	99	28
2	Hayes to Pearl	94	50	57	74	24
3	Pearl to Lovering	43	20	39	47	27
4	Lovering to Pleasant	119	58	105	88	30
5	Pleasant to Whipple	203	103	45	144	41
6	Whipple to Seamans	239	110	156	195	85
7	Seamans to Colby E. Entrance	109	72	97	138	66
TOTAL		928	484	613	786	302

Notes: The following uses are excluded from the calculations for parking demand estimates and parking demanded by local regulations: Block 2 does not include funeral home, Block 4 does not include KCOA, Block 5 does not include Day Care facility, Block 6 excludes Colby Maintenance building. No parking rates local or national are available for these land uses.

Source: UVLSRPC Occupancy counts, Sept.22, 2004; ITE Parking Generation Rates, 1987 & Parking Principles, Special Report 125, Highway Research Board; New London Site Plan Review Parking Standards, 1990

The existing parking demand for the study area is estimated to be 613 spaces. The average demand ratio for all land uses is 2.38 spaces per 1,000 livable square feet. This is our best estimation given resources and the intended use of the information. In reality, this overall factor would be slightly lower due to the exclusion of several land uses when calculating demand.

The total demand equates to 66% occupancy of the existing parking supply. During the occupancy counts in September, overall occupancy was around 52%.

Comparing September occupancy counts to the parking that is required by local regulation reveals that current parking requirements are in excess of parking demanded, by about 302 spaces. Each block reveals that estimated demand, and required local parking exceed the levels of occupancy surveyed in all blocks (Table 4). This comparison shows the difference between the number of required parking spaces and the occupancy for September's highest hour of usage by block. It appears from this analysis that local parking requirements may be requiring more parking than is typically used.

The total parking required by local regulation is less than the total off-street parking available (786 and 707 respectively). Only 363 of these spaces were occupied during the highest hour of use observed. Off-street parking occupancy for all land uses within each block was then compared to local parking requirements for each land use (see Table 5). This shows that land uses within

the block are satisfying their own demand without reliance on public on-street parking. The percentage occupancy of the available spaces and percentage occupancy of required parking by regulation are telling figures. Results indicate that land uses within the study area have ample parking to support them. Block 7 shows a large difference between these two figures, which is due to counting Colby-Sawyer College patrons parking on-street but excluding their demand from the parking estimates.

Block #	Defining Streets	Off-street Available	Off-street occupied	Spaces required by local Regulation	Occupancy as % available	Occupancy as % of Parking Required by Regulation
1	Parkside to Hayes	114	70	99	61%	70%
2	Hayes to Pearl	80	45	74	56%	61%
3	Pearl to Lovering	35	18	47	51%	38%
4	Lovering to Pleasant	98	45	88	46%	51%
5	Pleasant to Whipple	165	90	144	55%	63%
6	Whipple to Seamans	187	74	195	40%	38%
7	Seamans to Colby E. Entrance	28	21	138	75%	15%

Source: UVLSRPC Occupancy counts, Sept.22, 2004, New London Site Plan Review Parking Standards, 1990

Caution should be used when making comparisons between occupancy levels, required parking and demand estimates, especially when considering amendments to town parking requirements. Downtowns often diminish demand due to the interdependence of similar land uses. This is due to variation in peak periods for different uses and site-specific factors that encourage alternative transportation modes, which can have a large influence on the amount of parking demanded. Using a published factor is a simplistic method to determine parking demand and should be used as one indicator of demand and/or adjusted according to local conditions.

III. DOWNTOWN TRAFFIC

Several traffic counts were completed as part of this report. Traffic counts were completed in the summer and fall at the following locations:

- Pleasant Street, south of Main Street
- Pleasant Street, north of Main Street
- Main Street, west of Colby Sawyer entrance
- Main Street, east of Lakeside Road
- Pleasant/Main Street intersection

Table 6 summarizes the traffic counts. No trend data is available for any of these locations. According to the data, traffic patterns change from summer to fall. Along Pleasant Street, north of Main Street, a higher traffic volume in the summer is likely attributable to visitors to the lake. In the fall, traffic increases west of Colby Sawyer and on South Pleasant Street.

Location	Summer AWT	Fall AWT	Percentage Difference
Pleasant Street south of Main Street	1,590	1,660	4.4%
Pleasant Street north of Main Street	3,840	3,440	-10.4%
Main Street west of Colby Sawyer Entrance	4,900	5,060	3.3%
Main Street east of Lakeside Road	11,250	10,330	-8.2%

Source: UVLSRPC Traffic Counts; Summer July 13-15, 2004 and Fall September 14-16, 2004

It is difficult to ascertain how meaningful these variations are. However, it seems logical that the two very different populations in New London, college students and summer seasonal residents, have different travel patterns.

A turning movement count was completed for the Pleasant/Main Street intersection in August and October. This intersection is frequently congested for brief periods, especially while schools are in session. The lack of turning lanes and pedestrian traffic contributes to congested conditions.

Table 7: Main/Pleasant Street Intersection Traffic Summary						
	AM Peak		Mid-Day Peak		PM Peak	
	Time	Volume	Time	Volume	Time	Volume
August Count	7:45-8:45	774	11:45-12:45	1104	4:15-5:15	1205
October Count	7:15-8:15	1010	11:30-12:30	1009	2:00-3:00	1077

Source: UVLSRPC Turning Movement Counts August 25 and October 19, 2004

Three peak hours were identified for the intersection. These peaks changed from the summer to fall counts, most notable is the PM peak change from 4:15-5:15 to 2:00-3:00PM due to Kearsarge Middle School traffic.

A large volume of left turns from Main and Pleasant Streets creates movement conflicts and increases delay at the intersection. A Level-Of-Service (LOS) analysis was completed for the intersection using the PM peak period from the August count. The results show that the South Pleasant Street approach was an LOS D and the north approach a C. Both Main Street approaches operated at an LOS A.

Table 8: Level-Of-Service Criteria	
LOS	Prevailing Conditions
A	Little to no congestion
B	Slight congestion
C	Average congestion
D	Above average congestion
E	High levels of congestion
F	Extreme congestion

IV. TRAFFIC SAFETY

State Department of Transportation and local accident reports were reviewed to identify vehicle and pedestrian safety issues. State reports from Jan. '99 – Dec. '03; and local data up to Sept. 7, 2004 were reviewed. According to the reports, there are about 13-17 accidents within the study area each year that are appropriate for consideration. Many accidents are not attributable to traffic conditions, operations, lighting or signage. For example, instances where the car was not placed into park and rolled into an object are not attributable to local conditions, and reports of inattention like this were not considered.

There are no formally identified, NHDOT high accident locations within the study area. However, given traffic volumes, there are certain to be mishaps. In fact numerous studies show higher accident rates in areas with on-street parking. Most accidents happen at the intersection of Main and Pleasant, various locations along Main Street, and in off-street parking areas. Reports reveal that this happens in several ways:

- Rear end collisions, particularly along Main Street. Vehicles yielding to pedestrians crossing the street are sometimes rear-ended by following vehicles.
- Vehicle parking maneuvers, on and off-street, which result in collisions. Vehicles backing out of Jiffy Mart sometimes collide with vehicles on Pleasant Street. Sight distances in this area are block by the Kidder building.



EXHIBIT 2: Van blocks sight distance at Williams and Main Street intersection.

- Collisions maneuvering the Main/Pleasant intersection. Vehicles trying to enter the traffic stream sometimes collide with another vehicle that they did not see and/or become impatient and try to enter traffic in small gaps.

These results are not meant to suggest that conditions in New London are unsafe, although improvements could be made to enhance existing conditions. This may include removing parking spaces to enhance safety because occupancy surveys indicate excess parking supply. This could also include increased enforcement of no parking on Main St. near Lovering St intersection and/ or additional parking restrictions near site access points and Town streets to improve sight distances.

V. OTHER PARKING ISSUES

Barn Playhouse

The Barn Playhouse provides evening and matinee theater performances in its Main Street building which has 326 seats. Located outside the study area in a residential district, the Playhouse was included in this study due to issues with parking overflow onto side streets, and pedestrian safety. The Playhouse is surrounded by Main, Williams, Everett and Parkside Streets. Parking for theater patrons is provided off-street in the Barn Playhouse parking lot located behind the theater, and on-street along peripheral streets.



EXHIBIT 3: Unorganized parking limits off-street lot capacity

Parking occupancy and general conditions were assessed for the August 25, 2004 matinee performance which started at 2 p.m. Parking restrictions include six spaces in front of the Playhouse that are handicap and one 5-minute van parking space. Off-street parking in the lot behind the theater is unmarked. Large buses are directed to park on the eastbound side of Main Street just before Williams Street.

Upon commencement of the performance, there were a total of 95 vehicles parked in the Playhouse environs. About 58 percent of these were located in the off-street parking lot and 21 percent parked along Main Street. The remaining vehicles, approximately 14, were observed parked on Williams and Everett Streets.

No parking generation rates are available for theaters. However, New London does have a standard in their site plan review regulations, which is 0.3 spaces per seat. This means 98 spaces are required. The Playhouse cannot meet all the demand for parking with their off-street parking lot, which held an unorganized 55 vehicles during our observation. Striping the off-street parking or manually directing parking would significantly increase the capacity of the lot, but unlikely enough to satisfy all demand. Unless the size of the off-street lot is increased, parking will need to continue along surrounding streets, which if done properly is not necessarily a problem. Several problem spots do warrant consideration:

- Bus parking on Main Street blocks sight distances at the Williams/Main Street intersection and creates a potentially dangerous conditions for pedestrians and vehicles (see Exhibit 6). Moving the bus parking area to another location, possibly Williams Street, would enhance safety.
- Continue to park along Main Street with proper set backs from crosswalks and intersections. Pedestrian facilities on the south side of Main Street would assist patrons in reaching their vehicles safely by keeping them off Main Street (see Exhibit 5).

Downtowns and Parking

The size, type and characteristic of activities in the downtown determine the demand for parking. This is an ever-changing environment and the interactions are complex. Complimentary activities often lesson the demand for parking by offering the ability to share parking lots; an example would be office uses and restaurants, where their peak demands are generally at different times of the day. In theory, office workers could use restaurant space during the day and diners use office parking in the evening when workers have gone home. Another type of interaction is the ability to park in one location and visit several activities, such as go to the bank, get lunch, pay tax bill and visit the bookstore before picking up the kids and going home. These are all part of the community interactions which are missing in suburban strip malls where parking and traffic issues are often great.



EXHIBIT 4: Bus block sight distance of vehicle turning on to Williams St.



EXHIBIT 5: Main St. parking maneuvers and congestion illustrate need for sidewalks on right side of street.



EXHIBIT 6: Bus parking blocks sight distance making vehicle entry onto Main Street difficult

Giving in to pressures to increase the supply of parking in downtowns, particularly when done site-by-site in a piecemeal manner, may disrupt these interactions. Most downtowns were developed before the creation of the automobile and hence the concept of parking. As more parking is created to support the automobile, the ability to walk from one activity to the next is diminished and parking demands are likely to increase. This would also likely contribute to additional traffic congestion as well.

As New London develops, care should be taken in maintaining the interactions common to downtowns and which lesson parking and traffic demand. One possibility worth investigation is providing public parking in a pay-in system. This eliminates the piecemeal approach to providing parking for site development and seeks to maintain a pedestrian-friendly environment and decrease parking demand.

Reports of Parking Shortages

Although the supply of parking in the study area is adequate to support the area land uses, there are reports of parking shortages and issues.

Fire Station – Jack’s Coffee

One such issue is afternoon pick-ups of school children at the Kearsarge Elementary School. Current traffic circulation for the school does not permit parents to use the school access road (Cougar Court) to pick up children after school. As a result, parents use neighboring private off-street parking, namely the lots of Peter Christians, Jacks, Wildberry Bagel, Chadwicks Funeral Home and New London Agency for pick-ups. This places pressures on these lots' limited spaces. The school was not evaluated as part of this study; however, inspection during occupancy counts revealed sufficient parking at the school to meet their demands and the issue with pick-ups seems to be strictly a matter of policy. Already, measures are being



EXHIBIT 7: Kearsarge Elementary School--Restrictions prohibit pick-up near school exit and results in pressures on nearby private lots.

taken by downtown business users in this area to more effectively use existing parking by parking their vehicles in the rear school lot, presumably to compensate for the spaces lost during school pick-ups. During the summer occupancy counts we observed between 8-10 vehicles parked in the school lots near these same businesses. This measure seems to work well, as the school, even while in session, has ample parking.

Kearsarge Elementary School is in the process of bonding for the construction of a new facility outside of New London. This may offer possibilities to formalize public parking in this area.

Town Hall

The Town has an arrangement to use the church parking lot behind the Town Offices. During occupancy counts we observed an average of 5-11 spaces occupied in this lot. We were unable to determine if these were strictly users related to the Town Offices or church events. Usage in the church lot is fairly constant throughout the day. Nonetheless, it seems possible that the Town Hall is unable to satisfy its parking demand with its own off-street parking. The existing relationship with the church was observed to work well.

VI. RECOMMENDATIONS

Below are general recommendations followed by Table 9, which identifies specific problems and possible countermeasures.

1. We recommend that New London take no immediate action to increase the existing parking supply in the downtown.
2. Develop a parking management program. A parking advisory committee could oversee this process and could include the many stakeholders in downtown parking, such as the Town, merchants and the college. Responsibilities could include:
 - Continued monitoring of parking supply and demand
 - Identify safety and parking issues within the Downtown area
 - Inform public of parking needs and solutions
 - Plan for growth and the possibility of new parking facilities (maybe a public pay-in system to avoid private piecemeal parking development)
 - Recommend changes to Town parking requirements
3. Before increasing the supply of parking consider lower-cost mechanisms to use existing parking supply more efficiently.
 - Investigate parking turnover on-street and consider time limit restrictions to increase supply.
 - Consider increased parking enforcement and fines to discourage illegal parking, especially in unsafe areas.
 - Examine the development of directional signage to make patrons aware of underutilized parking facilities.
 - Coordinate with Kearsarge Middle School to address parking for after school pick-ups. Investigate use of school parking should the school change location.
 - Consider arrangements that allow public parking on church lots and other off-peak facilities.
 - Consider identifying unorganized off-street lots and require more efficient layouts during site plan review.

Table 9: Parking/Traffic Problems & Countermeasures

Problems	Countermeasures
Private off-street parking used for school pick up	Reorganize school traffic circulation to allow student pick-ups onsite.
Parked vehicles block sight distances at intersections and crosswalks	Enhance sight distances by restricting parking near intersections and crosswalks and mark appropriately. Consider relocating crosswalks. Remove the on-street parking space in front of Lake Sunapee Bank nearest to Pleasant St.
Rear end collisions on Main St.	Reduce speed limit if justified by further study. Install/improve signing or markings for crosswalks. If traffic signal is installed, include pedestrian phase.
Bus parking for the Barn Playhouse blocks sight distance & spillover parking in residential neighborhood	Move bus parking on Main Street to another location. Direct parking in off-street lot or stripe. Enforce no parking in residential neighborhood.
Unseen off-street parking underutilized	Identify and provide signage directing users to available parking. Consider other methods for changing the perception of inadequate parking.
Parking lot collisions	Wider aisles in parking lots. Stripe unmarked lots.
Traffic volumes at Main/Pleasant St.	Investigate traffic signal or roundabout. Consider rerouting traffic by prohibiting left hand turns from Main to Pleasant St. Install turn lanes.
Local parking standards require more parking than usage counts	Calibrate parking demand estimates and use factors to develop own parking standards for use in permitting development.
Limited on-street handicap parking	Consider restricting some additional on-street parking to handicap use; use caution to ensure proper conditions from area business to parking space e.g. ramps.