



MEMORANDUM

TO: Steve Palmer
FROM: Richard Harrall *RHH*
DATE: May 4, 2011
RE: Task 1 Calculation of Parking Demand and Supply
Bethel, Connecticut
MMI# 4494-01-1

Overview

In accordance with the study scope of services, we have completed Task 1 – Calculation of Parking Demand. While the focus has been on the block bordered by Library Place, School Street, PT Barnum Square and Greenwood Avenue, a broader area was analyzed as to impact on the subject block. This analysis included an inventory of land use and parking demand for the block bordered by Rector Street, Greenwood Avenue and Depot Place. In addition, the impacts of the Hurgin Municipal Center as well as the potential re-use of the old town hall on the subject block were taken into consideration.

As a result of this broader analysis, the following findings can be made:

- There is a significant amount of parking available to the rear of properties on the south side of Greenwood Avenue. However, Greenwood Avenue presents a physical and perceived obstacle to use of that parking to serve the subject block.
- The variety of activities in the Hurgin Municipal Center including town government departments, the senior center and probate court impacts the on-street parking on School Street.
- The small retail plaza and the post office on the west side of Library Place are high parking demand generators with the potential to have “spill over” impacts on parking available in the subject block.

Calculation of Demand

As a first step in the calculation of demand for the subject block, a database was created containing parcel based information including building square footage, use and parking requirements based on the zoning regulations. This database is attached hereto as Figure 1 and titled Base Parking Demand. This base demand does not include either the library or the old town hall. This base demand is 234 spaces.

There is no specific requirement for a library in the zoning regulations. The greatest variable to the base demand is the demand generated by the library. The peak demand time periods vary based upon the programming of the building use. The peak hour demand that occurs on a somewhat regular basis is the story hour for children. Held weekday mornings, this program creates a parking demand of approximately 25 spaces. The library employs 22 people with an average parking demand of 15 spaces. In terms of patrons, the library serves approximately 12,000 people a month. If this number served is spread over 30 days, the daily total is 400. Assuming the library is open on average 10 hours a day, this equals 40 patrons per hour. Assuming a 30 minute average turnover, the resulting demand for parking is 20 spaces for patrons. Therefore the total parking demand for the library is 60 spaces.

If the old town hall is sold and renovated for office use, the parking demand is 40 spaces based on 7788 square feet in the building with the office zoning requirement of 5 spaces per 1000 square feet. This results in a total demand of 335 (spaces rounded) as shown on Figure 2. As we know, this approach is hypothetical and is not how parking demand in a mixed use downtown actually occurs. There are various peak demands for parking based upon the specific use. The Bethel Zoning Regulations acknowledge this to be the case and allow a reduction of up to 25% of the parking requirement when there are different usage patterns and shared parking is available.

In order to quantify parking demand on an hourly basis, the number of gross required parking spaces were grouped by use, and recognized standards for usage throughout the day were applied. The results of this calculation are shown in Figure 3 attached hereto. Employing this methodology, the peak demand without re-use of the old town hall but including the library is reduced from 335 spaces to an AM peak of 260 spaces and a PM peak of 274 spaces.

An alternate is presented in Figure 4. The demand in Figure 3 assumes the old town hall to be demolished. The alternate in Figure 4 assumes re-use of the old town hall for office use at 5 spaces per 1,000 square feet or 40 spaces. This results in a peak demand of 300 spaces in the AM and 312 spaces in the PM.

These peak demands were then compared to two different parking layouts. Both parking layouts assumed the joint use of re-organized parking on School Street to the rear of properties fronting on Greenwood Avenue. One layout assumes demolition of the old town hall and inclusion of that area in the parking calculation. This results in 284 parking spaces. The second layout assumes re-use of the old town hall for office use. This results in 241 parking spaces. There is no inclusion of on-street parking on School Street in these calculations. It is assumed that these spaces will be used by the patrons of the Hurgin Municipal Center.

The parking spaces created in each layout were then compared to the peak demands shown in Figures 3 and 4. The demand of 260 AM peak and 274 PM peak can be accommodated with the demolition of the old town hall with 284 spaces provided. The demand of 300 AM peak and 312 PM peak cannot be provided with the re-use of the old town hall with 241 spaces provided.

Please call me once you have had an opportunity to review this memorandum and we can discuss the assumptions, methodology and conclusions.

Figure 1: Town of Bethel Village District Parking Study

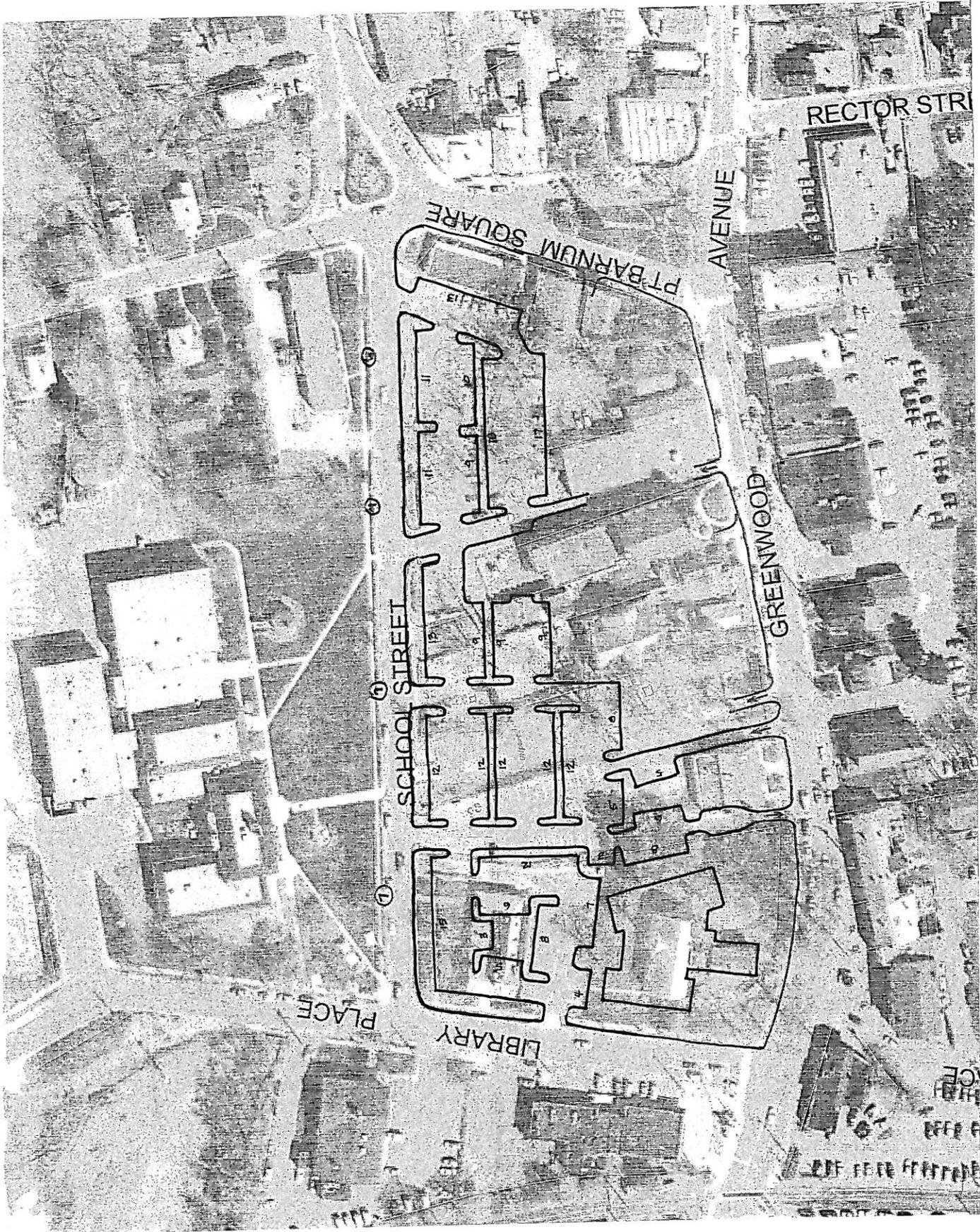
MBL	Address	State Land Use Code	Living Units	Acres	Res - Sqft	Com - RSqft	Zoning Spaces/Sqft	Minimum Parking Spaces
22 32 06	145 GREENWOOD Ave	013 - Multi-use Primarily Residential	0	0.27	0	800	5/1000	4
22 32 04	155 GREENWOOD Ave	031 - Multi-use Primarily Commercial	1	0.60	0	1,420	5/1000	7
22 32 05-14	153 GREENWOOD Ave	031 - Multi-use Primarily Commercial	1	0.00	0	1,082	5/1000	5
22 32 05-15	153 GREENWOOD Ave	031 - Multi-use Primarily Commercial	1	0.00	0	1,012	5/1000	5
22 32 09	125 GREENWOOD Ave	031 - Multi-use Primarily Commercial	3	0.42	0	1,776	5/1000	9
22 32 12	06 P T BARNUM Sq	031 - Multi-use Primarily Commercial	1	0.09	0	1,982	5/1000	10
22 32 13	08 P T BARNUM Sq	031 - Multi-use Primarily Commercial	2	0.12	0	2,049	5/1000	10
22 32 05-01	153 GREENWOOD Ave	325 - Small Retail	0	0.00	0	861	5/1000	4
22 32 05-02	153 GREENWOOD Ave	325 - Small Retail	0	0.00	0	562	5/1000	3
22 32 05-03	153 GREENWOOD Ave	325 - Small Retail	0	0.00	0	709	5/1000	4
22 32 08	137 GREENWOOD Ave	325 - Small Retail	0	0.58	0	6,285	5/1000	31
22 32 10	123 GREENWOOD Ave	325 - Small Retail	0	0.09	0	515	5/1000	3
22 32 14	12 P T BARNUM Sq	325 - Small Retail	0	0.46	0	3,371	5/1000	17
22 32 05-04	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	517	5/1000	3
22 32 05-05	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	936	5/1000	5
22 32 05-06	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	658	5/1000	3
22 32 05-07	153 GREENWOOD Ave	340 - Office Buildings	1	0.00	0	685	5/1000	3
22 32 05-08	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	1,272	5/1000	6
22 32 05-09	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	1,274	5/1000	6
22 32 05-10	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	632	5/1000	3
22 32 05-11	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	799	5/1000	4
22 32 05-12	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	704	5/1000	4
22 32 05-13	153 GREENWOOD Ave	340 - Office Buildings	0	0.00	0	759	5/1000	4
22 32 03	159 GREENWOOD Ave	341 - Bank	0	0.71	0	7,020	5/1000	35
22 32 07	141 GREENWOOD Ave	903 - House of Religious Worship	0	0.39	0	6,752	1/150	45
TOTAL:			10.00	3.73	0.00	44,432		234

Figure 2: Total Parking Demand	
Land Use	Minimum Parking Spaces
Base Uses	234
Library	60
Old Town Hall	40
Total Demand	335 (Rounded)

Figure 3: Shared Parking: Monday Through Friday Parking Requirements without Old Town Hall

State Land Use Code	Minimum Parking Spaces	Monday Through Friday Parking Requirements without Old Town Hall																		
		7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	
013 - Multi-use Primarily Residential	4	3	3	3	3	2	2	2	2	2	2	3	3	3	4	4	4	4	4	4
031 - Multi-use Primarily Commercial	47	4	8	20	32	41	46	47	46	45	41	37	39	42	41	29	15	6	0	0
325 - Small Retail	62	5	11	26	42	54	60	62	60	59	54	49	51	55	54	38	20	8	0	0
340 - Office Buildings	41	8	26	38	41	41	37	37	40	38	32	19	9	3	3	1	1	0	0	0
341 - Bank	35	7	22	33	35	35	32	32	34	33	27	16	8	2	2	1	1	0	0	0
903 - City/Town Property/Library	60	0	10	27	31	42	35	47	47	50	35	29	30	60	43	0	0	0	0	0
903 - House of Religious Worship	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
TOTAL:	294	72	125	191	229	260	256	272	274	272	236	199	185	211	192	118	86	63	49	49

Source: Shared Parking Models, Tempe, AZ and ITE Parking Standards (Library Data)



CONCEPTUAL RE-CONFIGURATION OF PARKING AREAS-2
 LIBRARY PLACE / SCHOOL STREET / PT. BARNUM SQUARE
 BETHEL, CONNECTICUT

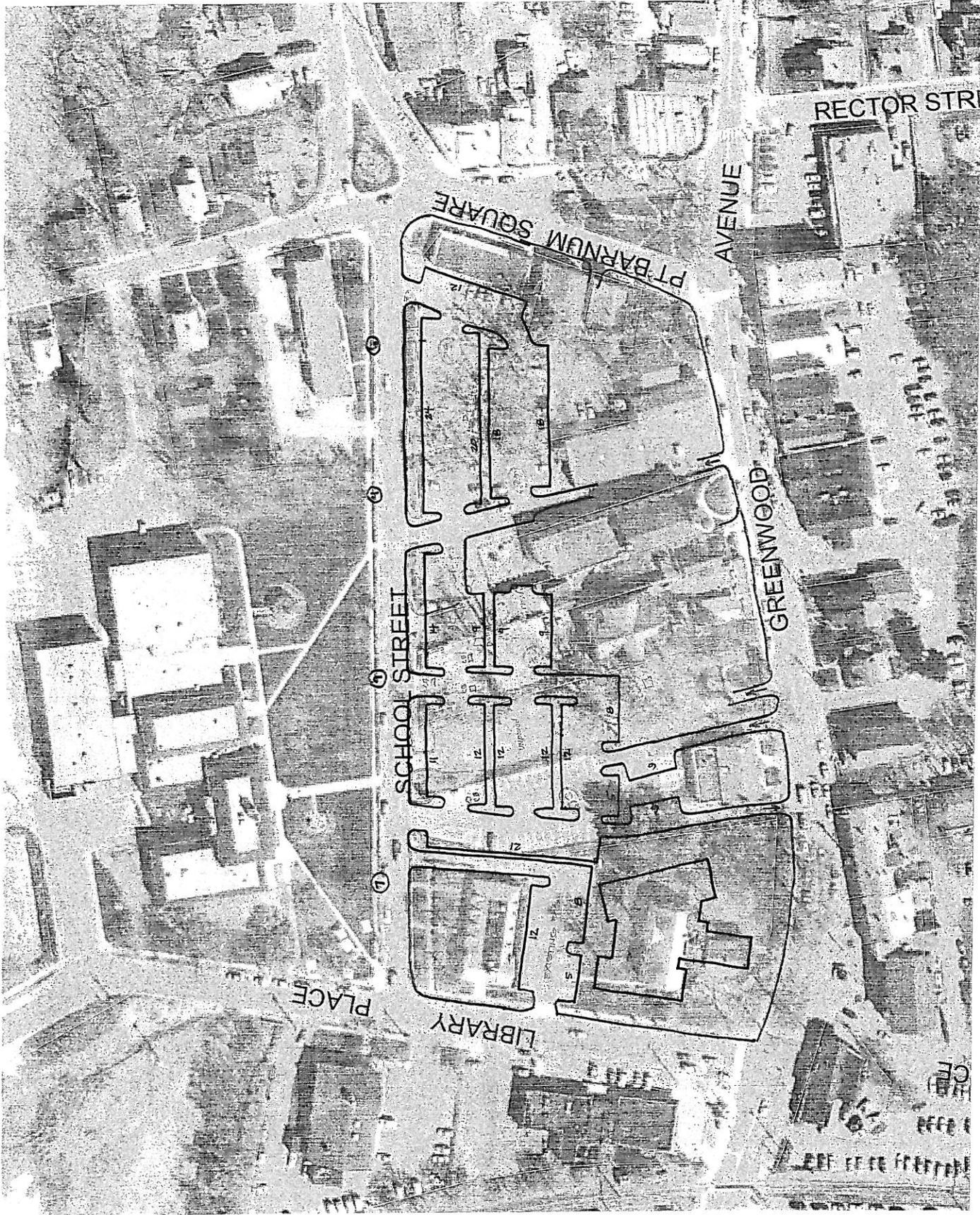
EXISTING BUILDING REMOVED
 23+ PARKING SPACES SHOWN

MILGROVE & McBRIDE, INC.
 APRIL 28, 2011
 SCALE: 1" = 50'

Figure 4: Shared Parking: Monday Through Friday Parking Requirements with Old Town Hall

State Land Use Code	Minimum Parking Spaces	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 AM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	12:00 AM	
013 - Multi-use Primarily Residential	4	3	3	3	3	2	2	2	2	2	3	3	3	4	4	4	4	4	4	4
031 - Multi-use Primarily Commercial	47	4	8	20	32	41	46	47	46	45	41	37	39	42	41	29	15	6	0	0
325 - Small Retail	62	5	11	26	42	54	60	62	60	59	54	49	51	55	54	38	20	8	0	0
340 - Office Buildings	81	16	51	75	81	81	73	73	79	75	62	38	19	6	6	2	2	0	0	0
341 - Bank	35	7	22	33	35	35	32	32	34	33	27	16	8	2	2	1	1	0	0	0
903 - City/Town Property/Library	60	0	10	27	31	42	35	47	47	50	35	29	30	60	43	0	0	0	0	0
903 - House of Religious Worship	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	45
TOTAL:	334	80	150	229	269	300	292	308	312	309	267	218	194	214	195	119	87	63	45	49

Source: Shared Parking Model, Tempe AZ and ITE Parking Standards (Library Data)



MILONE & MACBROOM, INC.
 APRIL 20, 2011
 SCALE: 1" = 60' ±

EXISTING BUILDINGS RETAINED
 241 PARKING SPACES SHOWN

CONCEPTUAL RE-CONFIGURATION OF PARKING AREAS - 1
 LIBERTY PLACE / SCHOOL STREET / PT BARNUM SQUARE
 BETHEL, CONNECTICUT