

TECHNICAL MEMORANDUM

DATE: *Tuesday, November 11, 2014*

TO: *Scott Bakos, Partner – Bermello Ajamil & Partners, Inc.*

CC: *Cornell Knight, Town Manager; Paul Paradis, Town Council Chair – Town of Bar Harbor
Eric Haggett, Associate – DESMAN Associates*

FROM: *Andrew S. Hill*

PROJECT: *Backyard Lot Parking Study* **PROJECT #:** *20-13135.01-3*

RE: *Phase 3 Report*

1. INTRODUCTION

In March of 2013, the Town of Bar Harbor issued a RFP inviting qualified firms to submit proposals to execute a feasibility study. The objective of this engagement was to determine if the area known at the 'backyard parking lot' could support development of a parking structure. This parcel was identified as preferential for development into structured parking, as it would support the recently completed West Street Hotel as well as abutting existing businesses and nearby enterprises such as the whale watching expeditions. The site was also advantageous as it was felt it contained adequate dimensions to allow for inclusion of grade-level retail space along the Roddick Street face without negatively impacting the efficiency of structural design.

This engagement, as conceived by the Town, was divided into four phases:

- Phase 1: Site Feasibility.
- Phase 2: Existing Conditions Assessment.
- Phase 3: Future Conditions and Alternatives Analysis.
- Phase 4: Financial Feasibility Assessment.

Bermello Ajamil & Partners, Inc. (Bermello Ajamil) and DESMAN Associates (DESMAN) submitted a proposal to provide these services and were ultimately selected and engaged under contract in June of 2013.

As part of the **Phase 1 Study**, Bermello Ajamil engaged Town stakeholders in a series of interviews, conversations and charrettes to identify limitations, concerns and restrictions on the project site. Working off site plans provided by the Town, two conceptual designs were developed; one which accommodated the private residence located in the middle of the site and a second which contemplated design with the residence removed and a consolidated footprint for the structure.

Option 1, which straddled the existing residence, could contain 371 spaces across four stories, but would negate the development of any other building along Roddick Street. The structure was fairly efficient at

413 square feet per space and a base construction cost of roughly \$7.42M, but spanned almost the entire footprint of the existing lot.

Option 2 contained a fewer spaces (248) and a less efficient design (425 square feet/space), but also a smaller, more compact footprint due the removal of the private residence. This design would only occupy about half the footprint of Option 1, allowing development of a four-story, 248-space structure in the core of the block while still supporting development of a new building fronting Roddick Street – in front the garage - and essentially ‘cloaking’ the structure from public sight with buildings on every side.

Both of these options were vetted with Town leaders and the general public in separate presentations. Since presentation of these options, the private residence has been vacated and could be acquired without undue cost or process, eliminating the need for Option 1.

[Note: A third option on the site, which would assume spanning the entire site foot print with a parking structure, allowing for greater capacity on site without increasing height, but eliminating the option of building anything else there, is being considered as an alternative in the Phase 3 study.]

In the **Phase 2 Study**, DESMAN performed a comprehensive parking supply inventory and occupancy observations in August of 2013 to establish existing conditions. DESMAN found that the 1,388 parking spaces inventoried across the defined study area were typically utilized to 88% or higher of capacity during the height of the summer tourist trade, with public parking facilities running at 93% - 99% of capacity on weekdays and weekends at the busiest hour of the day.

In practical terms, the Town needs at least 75 spaces immediately to reduce pressure plus replacement of whatever capacity is displaced when the garage is developed over the existing parking lot (~ 81 spaces). Additionally, given the amount of vacant space observed across the area during field surveys, DESMAN projected the Town may need as many as 85 additional spaces to support development in the near future. This suggested an initial design target of roughly 250 spaces.

The results of this analysis were vetted with Town leaders and the general public in separate presentations.

As part of the **Phase 3 Study**, DESMAN met with Town stakeholders in early August of 2014 to review field work to date and identify any concerns about our prior findings. At the request of certain attendees, DESMAN expanded the scope of their observations to include vehicles parked on-street south of Mount Desert Road as it was felt that these could be area employees flowing out of the downtown proper into adjacent residential neighborhoods. Additionally, DESMAN was asked to expand field observations regarding typical length of stay and turnover on Town streets to cover larger sections of Main Street, West Street and Rodick Street. DESMAN also performed peak hour occupancy counts across the study area to update data collected at the same time the prior year (2013) with the objective of measuring natural growth in parking demand, year-to-year.

In mid-September 2014, the Town provided DESMAN with a list of seven properties that may be redeveloped in the next 10 years. DESMAN developed a statistical model, based on Urban Land Institute and Institute of Transportation Engineers standards, to model the impact of these developments. This was used to identify any potential parking supply shortfalls arising from future development which may need to be corrected.

Once future needs and potential supply shortfalls were quantified across the area, DESMAN reviewed preliminary plans for the proposed garage on the Backyard Lot and recommended adjustments to reflect these conditions. DESMAN also reviewed options for addressing projected parking shortfalls by other methods including development of structured parking options on other municipal parking lots and establishing remote parking facilities with connecting shuttle service into Bar Harbor.

DESMAN reviewed the potential benefits and liabilities of each of these options, relative to the proposed structure on the Backyard Lot, and identified the option is most advantageous to the Town, based on our understanding of local values and concerns. As part of this phase of study, DESMAN also reviewed potential off-season uses for a proposed parking facility.

The objective of this engagement is to establish a final option for analysis to complete the **Phase 4 Study**. The purpose of this phase is to determine how the Town might finance the proposed improvements. Mechanisms to assist in financing and/or which may be needed to support the development may include:

- Introduction of metered parking in certain areas;
- Introduction of time limits in certain areas;
- Introduction of a Residential Parking Permit program in certain areas;
- Introduction of 'fee for use' parking in certain facilities;
- Creation of a formal agency to manage municipal assets;
- Creation of financial/accounting structure to support financing of a parking asset;
- Revision of existing ordinances to support recommended actions.

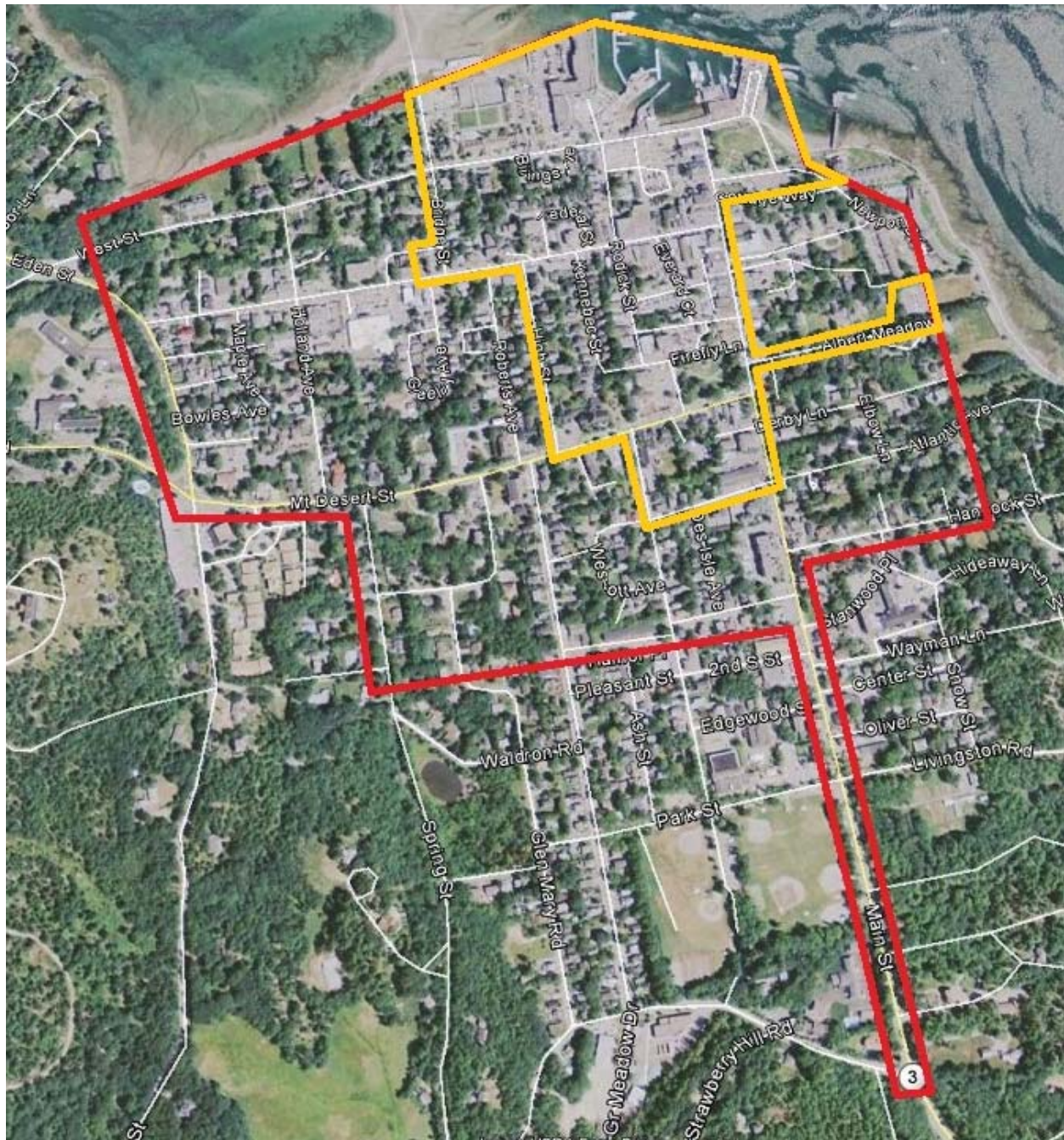
This final analysis will include review of best practices, examples of prior implementation in comparable communities, necessary timing and action steps to implement, as well as an assessment of potential capital and operating costs, gross income, net operating income and debt service.

2. EXISTING CONDITIONS (2014)

During an earlier phase of this project, parking surveys were conducted on Thursday, August 22, 2013 and Saturday, August 24, 2013. The study area for this initial phase was generally bounded by Bridge Street to the west, Atlantic Avenue to the south, Main Street to the east, and the coast to the north (shown in **yellow** in Figure 1, on the following page).

Prior to beginning the data collection process for this phase of the assignment (Phase 3), we met with City stakeholders to familiarize the group with the previous phases of the assignment and to reconfirm the boundaries of the study area. During this meeting, it was determined that the study area boundaries should be expanded in order to capture the full impact of tourist parking on the Town. With guidance from the stakeholders, the original study area was expanded farther to the west to Eden Street and farther to the south to the intersection of Main Street and Cromwell Harbor Road. **Figure 1**, next page, presents the boundaries of the expanded study area, shown in **red**, examined during Phase 3 of this project.

Figure 1 – Phase 3 Study Area with Original Study Area Overlay



The impetus behind expanding the study area for this phase of the project was to try and quantify the impacts of tourist parking on residential streets farther from the center of town; it was the contention of the stakeholders that the impact of tourist parking extends beyond the limits of the original study area.

The prior field work performed in August 2013 was not replicated within this expanded area, as this was outside of the project's scope and likely to provide little benefit. Rather, DESMAN performed supplement counts of vehicles parked on-street south of Mount Desert Road as it was felt, among

Steering Committee membership that these could be area employees flowing out of the downtown proper into adjacent residential neighborhoods. Additionally, DESMAN expanded field observations regarding typical length of stay and turnover on Town streets to cover larger sections of Main Street, West Street and Rodick Street. DESMAN also performed peak hour occupancy counts across the study area to update data collected at the same time the prior year (2013) with the objective of measuring natural growth in parking demand, year-to-year. First-hand observations of parking activity in the expanded study area were conducted on Thursday, August 14, 2014, between the hours of 9:00 AM and 5:00 PM, as well as Saturday, August 16, 2014, between the hours of 6:00 PM and 8:00 PM.

During the Friday survey period, hourly surveys were conducted of the parking spaces located on West Street, between Main Street and Eden Street, and Main Street, between Mt. Desert Street and 1st South Street. DESMAN's surveyors recorded partial license plate numbers of the vehicles parked in every space, every hour, in order to track which spaces were occupied and how long the same vehicle remained parked in a particular space.

In addition to monitoring the parking activity in these particular spaces, DESMAN also observed the volume of non-resident vehicles parking on the neighborhood streets east of Main Street and south of Mount Desert Road.

Lastly, during both the Thursday and Saturday survey periods, counts of the off-street public parking facilities were conducted during the peak demand period in order to determine the relationship between the demand for off-street parking and on-street parking, and to use for comparison with the data gathered in 2013.

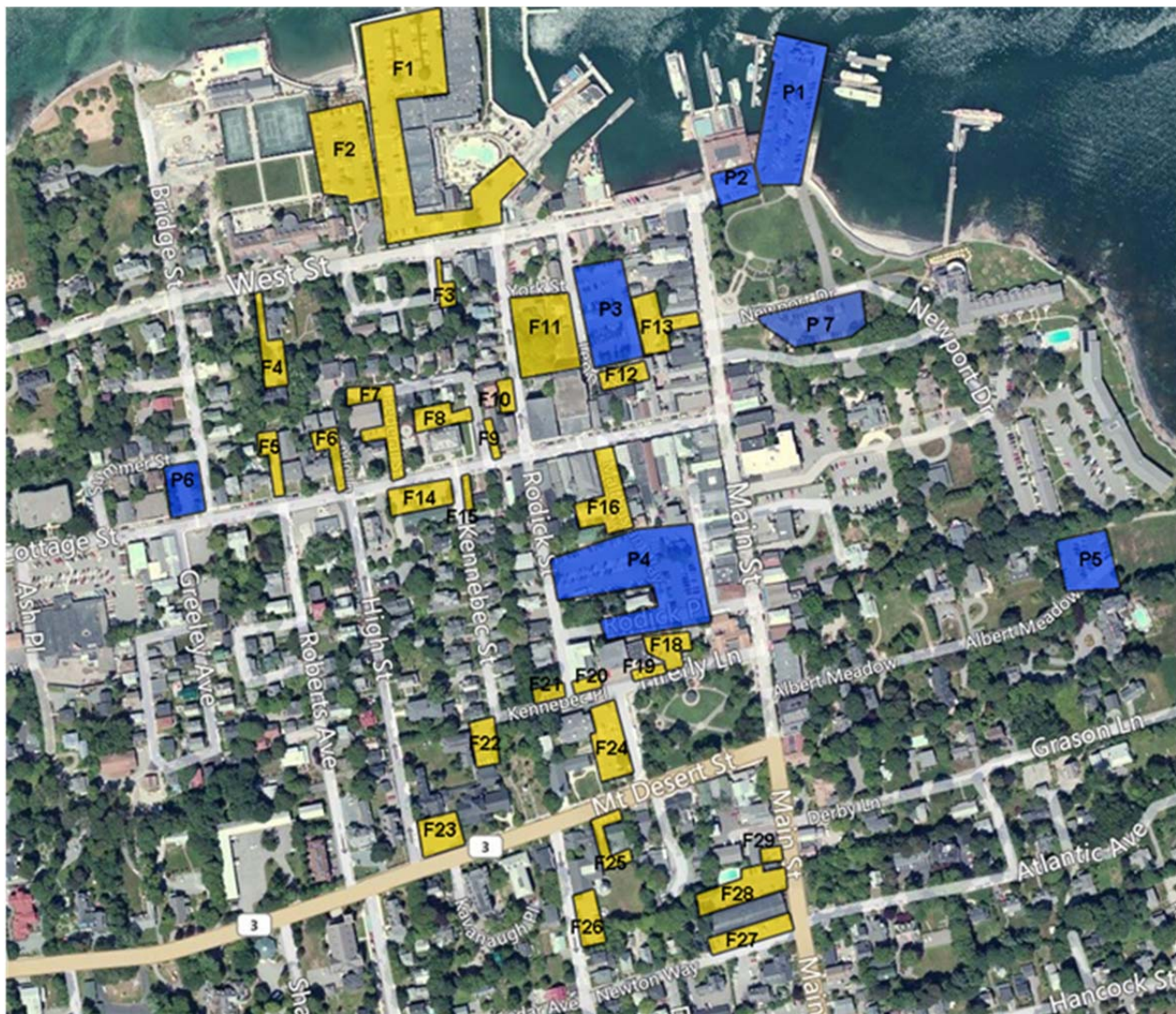
Comparison of Peak Hour Occupancy Counts (2013 vs. 2014)

In order to get a sense of how the demand for parking in Bar Harbor grew from 2013 to 2014, it was necessary to compare the occupancy data taken during both survey efforts. By comparing peak hour occupancy between the prior and current years, DESMAN could quantify growth in parking demand generated by increases in tourist volumes year-to-year.

Prior to conducting the peak hour occupancy surveys, DESMAN confirmed the 2013 parking inventory performed in each of the public and private parking facilities in study area. The locations of each facility are shown in **Figure 2** on the following page. The facilities labelled with an "P" are those parking lots available to the general public, while the facilities labelled with an "F" are parking lots associated with specific businesses that generally permit parking by only patrons of those businesses.

The original (2013) weekday peak hour observations were conducted on Thursday, August 22, between 6:00 and 7:00 PM; the updated (2014) counts were conducted on Thursday, August 14 at the same hours. Prior weekend peak hour occupancy counts were conducted on Saturday, August 24, 2013 between 6:00 PM and 8:00 PM; the most recent counts were conducted during the same hours on Saturday, August 16, 2014. Weather conditions during both the primary and most recent observations were fair and warm.

Figure 2 – Locations of Public and Private Off-Street Parking Lots Surveyed



Presented in **Tables 1** and **2** are the results of the off-street weekday and weekend survey efforts. These tables present the inventory of each facility, the practical capacity¹ of each facility, the recorded occupancies of each facility and the year-to-year variance in occupancy from 2013 to 2014.

As shown in Table 1, weekday peak occupancy at the off-street private parking facilities increased by about 3%, while peak occupancy at the public lots decreased by about 3%. Factoring for rounding error, the Town-wide growth in weekday off-street parking demand was about 1% from 2013 to 2014, with a net impact of six more vehicles at the peak hour than observed in 2013.

¹ Practical capacity is a measure used to explain the point at which a parking facility has become functionally full. Typically, when the occupancy of a parking facility reaches between 85% and 95% of capacity, the facility is said to have reached its practical capacity. This is the point at which the last few available spaces are difficult to find, increasing the number of drivers circulating looking for a space, decreasing the operational efficiency of the facility and potentially leading to vehicle-vehicle or vehicle-pedestrian conflicts. In the case of off-street parking facilities, a 90% factor was used.

In 2013, 80% of the privately-held off-street parking capacity and 99% of the public off-street capacity were utilized at the peak hour; comparable conditions were observed in 2014. The 2013 study projected a peak hour surplus of 68 spaces for private facilities and shortfall of 35 spaces for public lots at the peak hour on a weekday. The most recent observations show these impacts somewhat mitigated in 2014 with just 66 spaces open in private lots (82% utilization, +3% year-to-year), but a 23-space shortfall for public facilities at the peak hour on a weekday (96% utilization, -3% year-to-year).

Table 1 – Weekday Off-Street Parking Occupancy

Facility	Location	Inventory	Practical Capacity	08/22/13 6:00 PM	2013 Peak Utilization	08/14/14 6:00 PM	2014 Peak Utilization	Yr-to-Yr Variance	Yr-to-Yr Change	Surplus/ (Deficit)
Private F1	Harbor Side	146	139	136	93%	122	84%	(14)	-10%	17
F2	Bar Harbor Club	72	68	65	90%	60	83%	(5)	-8%	8
F3	B&B Lot	6	5	4	67%	5	83%	1	25%	0
F4	Manor House Inn	11	10	10	91%	14	127%	4	40%	(4)
F5	Dentist Office	4	3	2	50%	2	50%	0	0%	1
F6	SPA, Acadia Brochures Lot	11	10	3	27%	4	36%	1	33%	6
F7	63-67 Cottage St. Lot	5	4	4	80%	4	80%	0	0%	0
F8	USPS Lot	10	9	2	20%	0	0%	(2)	-100%	9
F9	Federal St. Lot	9	8	8	89%	7	78%	(1)	-13%	1
F10	23 Rodick St. Lot	9	8	3	33%	9	100%	6	200%	(1)
F11	West St. Hotel Cust. Lot	67	63	67	100%	67	100%	0	0%	(4)
F12	West St. Hotel Emp. Lot	21	20	7	33%	18	86%	11	157%	2
F13	Bayside Landing Lot	35	33	30	86%	19	54%	(11)	-37%	14
F14	Citgo Station Lot	10	9	2	20%	3	30%	1	50%	6
F15	Little Notch Bakery Lot	7	6	4	57%	1	14%	(3)	-75%	5
F16	Rite Aid Lot	24	22	17	71%	22	92%	5	29%	0
F17	Aveda Spa Lot	6	5	2	33%	6	100%	4	200%	(1)
F18	Police Lot	10	9	7	70%	16	160%	9	129%	(7)
F19	Police Lot	8	7	8	100%	8	100%	0	0%	(1)
F20	Serendipity Lot	4	3	2	50%	4	100%	2	100%	(1)
F21	Dimatteo's Pasta Lot	5	4	5	100%	5	100%	0	0%	(1)
F22	Rotory Library Back Lot	20	19	14	70%	12	60%	(2)	-14%	7
F23	Church lot	14	13	7	50%	11	79%	4	57%	2
F24	Reel Pizza / Church Lot	33	31	28	85%	31	94%	3	11%	0
F25	Acadia Hotel Lot	10	9	10	100%	6	60%	(4)	-40%	3
F26	Museum Lot	10	9	0	0%	0	0%	0	0%	9
F27	Villager Motel Lot	18	17	14	78%	18	100%	4	29%	(1)
F28	Villager Motel Lot	24	22	23	96%	24	100%	1	4%	(2)
F29	Parkside Restaurant Back lot	10	9	7	70%	10	100%	3	43%	(1)
Private Total		619	574	491	79%	508	82%	17	3%	66
				7:00 PM		7:00 PM				
Public P1	Town Pier Lot	81	73	81	100%	82	101%	1	1%	(9)
P2	West Street Lot	19	17	19	100%	19	100%	0	0%	(2)
P3	Backyard Lot	66	60	67	102%	59	89%	(8)	-12%	1
P4	Rodick Place Lot	115	104	117	102%	115	100%	(2)	-2%	(11)
P5	Albert Meadow lot	44	40	37	84%	38	86%	1	3%	2
P6	Bridge St. Municipal Lot	24	21	24	100%	22	92%	(2)	-8%	(1)
P7	Newport Drive Lot	43	39	43	100%	42	98%	(1)	-2%	(3)
Public Total		392	354	388	99%	377	96%	(11)	-3%	(23)
STUDY AREA TOTAL		1,011	928	879	87%	885	88%	6	1%	43

Weekend peak parking demand in off-street facilities, as shown in Table 2, grew approximately 4% (+33 vehicles) for the private parking lots and the public parking lots, as well as the Town as a whole. During the weekend peak period, overall off-street parking demand grew from 86% to 89%. In private facilities,

peak hour demand grew by 20 cars over 2013 observations. For the public parking facilities, the practical deficit of parking was 30 spaces, up from 18, during the weekend peak hour.

Table 2 – Weekend Off-Street Parking Occupancy

Facility	Location	Inventory	Practical Capacity	08/22/13 6:00 PM	2013 Peak Utilization	08/14/14 6:00 PM	2014 Peak Utilization	Yr-to-Yr Variance	Yr-to-Yr Change	Surplus/ (Deficit)
Private F1	Harbor Side	146	139	141	97%	142	97%	1	1%	(3)
F2	Bar Harbor Club	72	68	63	88%	66	92%	3	5%	2
F3	B&B Lot	6	5	6	100%	6	100%	0	0%	(1)
F4	Manor House Inn	11	10	11	100%	11	100%	0	0%	(1)
F5	Dentist Office	4	3	1	25%	2	50%	1	100%	1
F6	SPA, Acadia Brochures Lot	11	10	2	18%	2	18%	0	0%	8
F7	63-67 Cottage St. Lot	5	4	5	100%	4	80%	(1)	-20%	0
F8	USPS Lot	10	9	2	20%	3	30%	1	50%	6
F9	Federal St. Lot	9	8	7	78%	6	67%	(1)	-14%	2
F10	23 Rodick St. Lot	9	8	6	67%	6	67%	0	0%	2
F11	West St. Hotel Cust. Lot	67	63	67	100%	66	99%	(1)	-1%	(3)
F12	West St. Hotel Emp. Lot	21	20	10	48%	9	43%	(1)	-10%	11
F13	Bayside Landing Lot	35	33	35	100%	35	100%	0	0%	(2)
F14	Citgo Station Lot	10	9	0	0%	1	10%	1	100%	8
F15	Little Notch Bakery Lot	7	6	0	0%	2	29%	2	200%	4
F16	Rite Aid Lot	24	22	17	71%	18	75%	1	6%	4
F17	Aveda Spa Lot	6	5	3	50%	3	50%	0	0%	2
F18	Police Lot	10	9	10	100%	10	100%	0	0%	(1)
F19	Police Lot	8	7	8	100%	8	100%	0	0%	(1)
F20	Serendipity Lot	4	3	2	50%	3	75%	1	50%	0
F21	Dimatteo's Pasta Lot	5	4	3	60%	4	80%	1	33%	0
F22	Rotory Library Back Lot	20	19	14	70%	16	80%	2	14%	3
F23	Church lot	14	13	14	100%	13	93%	(1)	-7%	0
F24	Reel Pizza / Church Lot	33	31	30	91%	32	97%	2	7%	(1)
F25	Acadia Hotel Lot	10	9	2	20%	5	50%	3	150%	4
F26	Museum Lot	10	9	0	0%	0	0%	0	0%	9
F27	Villager Motel Lot	18	17	18	100%	18	100%	0	0%	(1)
F28	Villager Motel Lot	24	22	13	54%	20	83%	7	54%	2
F29	Parkside Restaurant Back lot	10	9	7	70%	6	60%	(1)	-14%	3
Private Total		619	574	497	80%	517	84%	20	4%	57
				6:00 PM		6:00 PM				
Public P1	Town Pier Lot	81	73	81	100%	81	100%	0	0%	(8)
P2	West Street Lot	19	17	19	100%	19	100%	0	0%	(2)
P3	Backyard Lot	66	60	66	100%	66	100%	0	0%	(6)
P4	Rodick Place Lot	115	104	111	97%	115	100%	4	4%	(11)
P5	Albert Meadow lot	44	40	29	66%	36	82%	7	24%	4
P6	Bridge St. Municipal Lot	24	21	22	92%	24	100%	2	9%	(3)
P7	Newport Drive Lot	43	39	43	100%	43	100%	0	0%	(4)
Public Total		392	354	371	95%	384	98%	13	4%	(30)
STUDY AREA TOTAL		1,011	928	868	86%	901	89%	33	4%	27

For on-street parking, weekday utilization grew by 14 vehicles over 2013 observations, with the projected peak hour shortfall growing from 42 spaces to 56 spaces as shown in **Table 3** on the following page. This represented a net increase in peak hour demand of 4% for on-street parking spaces over the 2013 observations.

Table 3 – Weekday On-Street Parking Occupancy

Street	Between	Inventory	Practical Capacity	8/22/13 6:00 PM	2013 Peak Utilization	08/14/14 6:00 PM	2014 Peak Utilization	Yr-to-Yr Variance	Yr-to-Yr Change	Surplus/ (Deficit)
West St.	Bridge St. & Rodick Pl.	26	22	26	100%	26	100%	0	0%	(4)
West St.	Main St. & Rodick St.	10	8	9	90%	10	100%	1	11%	(2)
West St.	Main St. & Bridge St.	26	22	24	92%	26	100%	2	8%	(4)
Bridge St.	West St. & Cottage St.	14	12	12	86%	12	86%	0	0%	0
Cottage St.	Bridge St. & Rodick Pl.	24	20	21	88%	24	100%	3	14%	(4)
Cottage St.	Kennebec St. & Bridge St.	16	13	16	100%	16	100%	0	0%	(3)
Cottage St.	Main St. & Rodick Pl.	16	13	16	100%	15	94%	(1)	-6%	(2)
Cottage St.	Main St. & Kennebec St.	23	20	23	100%	22	96%	(1)	-4%	(2)
Kennebec St.	Cottage St. & Kennebec Pl.	19	16	16	84%	18	95%	2	13%	(2)
Kennebec Pl.	Kennebec St. & Main St.	4	3	4	100%	4	100%	0	0%	(1)
Kennebec Pl.	Kennebec St. & Main St.	18	15	18	100%	17	94%	(1)	-6%	(2)
Mt. Desert St.	Main St. & High St.	24	20	24	100%	25	104%	1	4%	(5)
Mt. Desert St.	Main St. & School St.	11	9	11	100%	12	109%	1	9%	(3)
Main St.	Newton Way & Mt. Desert St.	12	10	11	92%	12	100%	1	9%	(2)
Main St.	Mt. Desert St. & Cottage St.	17	14	16	94%	17	100%	1	6%	(3)
Main St.	Cottage St. & West St.	16	13	16	100%	16	100%	0	0%	(3)
Main St.	West St. & Atlantic Ave.	37	32	37	100%	37	100%	0	0%	(5)
School St.	Mt. Desert St. & Newton Way	12	10	11	92%	11	92%	0	0%	(1)
Newton Way	School St. & Main St.	11	9	8	73%	11	100%	3	38%	(2)
High St.	Mt. Desert St. & Cottage St.	30	26	30	100%	28	93%	(2)	-7%	(2)
Rodick Pl.	Cottage St. & West St.	13	11	13	100%	13	100%	0	0%	(2)
Federal St.	Entire Street	10	8	6	60%	10	100%	4	67%	(2)
On-Street Total		389	326	368	95%	382	98%	14	4%	(56)

On weekends, on-street utilization grew by 5 vehicles over 2013 observations, with the projected peak hour shortfall growing from 34 spaces to 39 spaces as shown in **Table 4** on the following page. This represented a net increase in peak hour demand of 1% for on-street parking spaces.

Table 4 – Weekend On-Street Parking Occupancy

Street	Between	Inventory	Practical Capacity	08/22/13 6:00 PM	2013 Peak Utilization	08/14/14 6:00 PM	2014 Peak Utilization	Yr-to-Yr Variance	Yr-to-Yr Change	Surplus/ (Deficit)
West St.	Main St. & Bridge St.	26	22	25	96%	26	100%	1	4%	(4)
West St.	Main St. & Rodick St.	10	8	9	90%	10	100%	1	11%	(2)
West St.	Rodick St. & Main St.	26	22	24	92%	26	100%	2	8%	(4)
Bridge St.	West St. & Cottage St.	14	12	9	64%	10	71%	1	11%	2
Cottage St.	Bridge St. & Rodick Pl.	24	20	22	92%	24	100%	2	9%	(4)
Cottage St.	Kennebec St. & Bridge St.	16	13	16	100%	16	100%	0	0%	(3)
Cottage St.	Main St. & Rodick Pl.	16	13	16	100%	15	94%	(1)	-6%	(2)
Cottage St.	Main St. & Kennebec St.	23	20	23	100%	23	100%	0	0%	(3)
Kennebec St.	Cottage St. & Kennebec Pl.	19	16	17	89%	19	100%	2	12%	(3)
Kennebec Pl.	Kennebec St. & Main St.	4	3	3	75%	1	25%	(2)	-67%	2
Kennebec Pl.	Kennebec St. & Main St.	18	15	18	100%	13	72%	(5)	-28%	2
Mt. Desert St.	Main St. & High St.	24	20	24	100%	24	100%	0	0%	(4)
Mt. Desert St.	Main St. & School St.	11	9	11	100%	11	100%	0	0%	(2)
Main St.	Newton Way & Mt. Desert St.	12	10	12	100%	11	92%	(1)	-8%	(1)
Main St.	Mt. Desert St. & Cottage St.	17	14	17	100%	15	88%	(2)	-12%	(1)
Main St.	Cottage St. & West St.	16	13	16	100%	16	100%	0	0%	(3)
Main St.	West St. & Atlantic Ave.	37	32	37	100%	37	100%	0	0%	(5)
School St.	Mt. Desert St. & Newton Way	12	10	9	75%	10	83%	1	11%	0
Newton Way	School St. & Main St.	11	9	10	91%	11	100%	1	10%	(2)
High St.	Mt. Desert St. & Cottage St.	30	26	24	80%	26	87%	2	8%	0
Rodick Pl.	Cottage St. & West St.	13	11	12	92%	12	92%	0	0%	(1)
Federal St.	Entire Street	10	8	6	60%	9	90%	3	50%	(1)
On-Street Total		389	326	360	93%	365	94%	5	1%	(39)

Due to the fact that the on-street and off-street peak demand periods did not coincide and the fact that this analysis relies on data from only a few days of observations, it is difficult to pinpoint the precise background parking demand growth rate currently experienced in the Town of Bar Harbor. What the data does point to is a current parking demand growth rate of between 1% and 4%, annually. This is the demand growth that can be attributed to an increase in general visitor volumes and not to any specific new development project or attraction that is drawing additional visitors to Town. Later in this report, an in-depth analysis of anticipated future development projects will be conducted in order to determine their potential impact on future parking demand.

In addition to estimating the rate of background parking demand growth, this analysis indicates that during both the weekday and weekend peak demand periods, public off-street parking is exceeding 90% occupancy, reaching as high as 98% during the weekday peak demand period at on-street spaces. **This has resulted in combined practical parking deficits at on- and off-street public parking locations of 79 spaces on weekdays and 69 spaces on weekends.**

Given the extremely high demand for public on- and off-street parking spaces during the peak demand periods, there is a need to identify another solution to accommodate this demand. In addition to the existing demand and the background demand growth which is expected to continue in the future, changes to on-street parking policies and future development of available land could have an additional impact on the future supply of parking in Bar Harbor.

On-Street Parking Turnover Analysis

As part of the Phase 3 Study, hourly observations were conducted of the parking spaces located on West Street, between Main Street and Eden Street, and Main Street, between Mt. Desert Street and 1st South Street. On Thursday, August 14, 2014, DESMAN's surveyors recorded partial license plate numbers of the vehicles parked in every space, every hour, in order to track which spaces were occupied and how long the same vehicle remained parked in a particular space. In all, these street segments contain 229 parking spaces: 92 of these spaces are subject to a 2-hour time restriction, while 137 spaces provide unrestricted parking.

Table 5, next page, presents the inventory of spaces at which turnover surveys were performed. The spaces are broken-down by street segment, block face and parking restriction. As shown in the table, all of the spaces surveyed on Main Street are 2-hour spaces², while on West Street only the two blocks that are closest to Town Pier contain 2-hour spaces. The remainder of West Street and the surveyed segment of Rodick Street had unrestricted spaces.

The hourly surveys of these spaces, also shown in Table 5, revealed a peak demand hour of 1:00 PM (shown in yellow on the next page), when 98% (225 out of 229) of the on-street spaces were occupied. Additionally, during both the 12:00 PM and 2:00 PM hours, the occupancy of these spaces remained at

² In order to inspire the turnover of parking spaces, the Town identifies a number of on-street spaces as "2-Hour" parking. The goal of this policy is to keep people coming to Bar Harbor, whether visitors or employees working in town, from parking in prime on-street locations for the entire day. As shown in the table, there are other on-street spaces farther from the core of downtown that do not carry the same two-hour time restriction. These are the spaces intended for longer-term parkers, such as employees and all-day visitors.

or above 97%. Furthermore, the occupancy of the on-street spaces exceeded 85% from 11:00 AM through 4:00 PM, which means that – to the casual visitor searching for the last few open parking spaces along a roadway – all curbside spaces were for all practical purposes.

Table 5 – Inventory and Utilization of On-Street Spaces Examined for Turnover Survey

Street Segment	Block Face	Restriction	Inventory	9AM	10AM	11AM	12PM	1PM	2PM	3PM	4PM	5PM
West St. b/w Main & Rodick	N	2 Hours	15	10	11	12	10	12	13	13	12	15
West St. b/w Main & Rodick	S	2 Hours	10	9	9	9	10	10	10	9	10	8
			25	19	20	21	20	22	23	22	22	23
			Occupancy of Block	76%	80%	84%	80%	88%	92%	88%	88%	92%
West St. b/w Rodick & Bridge	N	2 Hours	4	2	4	4	4	4	4	3	4	2
West St. b/w Billings & Rodick	S	2 Hours	14	13	14	12	14	14	14	12	14	14
West St. b/w Rodick & Bridge	N	None	7	7	7	6	7	7	7	7	7	6
West St. b/w Bridge & Billings	S	None	12	12	12	12	12	12	12	12	10	12
			37	34	37	34	37	37	37	34	35	34
			Occupancy of Block	92%	100%	92%	100%	100%	100%	92%	95%	92%
West St. b/w Bridge & Eden	N	None	53	34	39	50	53	53	53	46	40	32
West St. b/w Eden & Holland	S	None	27	20	26	25	27	27	27	25	26	26
West St. b/w Holland & Bridge	S	None	25	24	25	25	25	25	25	22	21	18
			105	78	90	100	105	105	105	93	87	76
			Occupancy of Block	74%	86%	95%	100%	100%	100%	89%	83%	72%
Main St. b/w Mt. Desert & Newton Way	W	2 Hours	12	3	9	12	12	11	12	11	12	12
			12	3	9	12	12	11	12	11	12	12
			Occupancy of Block	25%	75%	100%	100%	92%	100%	92%	100%	100%
Main St. b/w Newton Way & 1st South	W	2 Hours	16	6	6	11	15	17	15	15	13	17
			16	6	6	11	15	17	15	15	13	17
			Occupancy of Block	38%	38%	69%	94%	106%	94%	94%	81%	106%
Main St. b/w Hancock & Atlantic	E	2 Hours	11	2	2	7	11	10	10	11	10	11
			11	2	2	7	11	10	10	11	10	11
			Occupancy of Block	18%	18%	64%	100%	91%	91%	100%	91%	100%
Main St. b/w Atlantic & Derby	E	2 Hours	5	0	2	5	5	5	5	4	5	4
			5	0	2	5	5	5	5	4	5	4
			Occupancy of Block	0%	40%	100%	100%	100%	100%	80%	100%	80%
Main St. b/w Derby & Mt. Desert	E	2 Hours	5	4	4	5	5	5	5	5	5	5
			5	4	4	5	5	5	5	5	5	5
			Occupancy of Block	80%	80%	100%	100%	100%	100%	100%	100%	100%
Rodick b/w Cottage & West	E	None	13	13	13	13	13	13	12	12	11	10
			13	13	13	13	13	13	12	12	11	10
			Occupancy of Block	100%	100%	100%	100%	100%	92%	92%	85%	77%
			TOTAL	229	159	183	208	223	225	224	207	192
			% Occupied	69%	80%	91%	97%	98%	98%	90%	87%	84%

Based on the results of the turnover survey, for the group of on-street spaces surveyed in 2014, the overall duration of stay was 2.5 hours. **Table 6**, next page, presents a summary of the turnover surveys conducted on Thursday, August 14, 2014, showing the number of vehicles parked in each street segment for durations of stay ranging from 1 – 9 hours. This table also shows that a total of 727 vehicles made use of the on-street parking spaces and each space turned-over an average of slightly more than 3 times over the course of the survey period.

Table 6 – Duration of Stay and Turnover by Street Segment and Parking Restriction

Street Segment	Block Face	Restriction	Inventory	1Hr	2 Hrs	3 Hrs	4 Hrs	5 Hrs	6 Hrs	7 Hrs	8 Hrs	9 Hrs	Vehicle Utilization	Length Of Stay (Hrs)	Vehicle per Space Turnover
West St. b/w Main & Rodick	N	2 Hours	15	23	5	4	2	0	1	0	5	1	41	2.6	2.7
West St. b/w Main & Rodick	S	2 Hours	10	20	13	3	3	0	0	0	1	1	41	2.0	4.1
			25	43	18	7	5	0	1	0	6	2	82	2.3	3.3
West St. b/w Rodick & Bridge	N	2 Hours	4	5	5	1	0	1	0	0	1	0	13	2.4	3.3
West St. b/w Billings & Rodick	S	2 Hours	14	49	23	6	0	0	0	0	1	0	79	1.5	5.6
West St. b/w Rodick & Bridge	N	None	7	7	4	0	2	3	0	1	2	0	19	3.2	2.7
West St. b/w Bridge & Billings	S	None	12	16	8	4	3	0	7	0	1	0	39	2.7	3.3
			37	77	40	11	5	4	7	1	5	0	150	2.1	4.1
West St. b/w Bridge & Eden	N	None	53	27	28	11	17	11	13	1	5	4	117	3.4	2.2
West St. b/w Eden & Holland	S	None	27	24	17	10	7	7	2	2	2	4	75	3.1	2.8
West St. b/w Holland & Bridge	S	None	25	22	10	12	4	3	9	2	3	1	66	3.2	2.6
			105	73	55	33	28	21	24	5	10	9	258	3.3	2.5
Main St. b/w Mt. Desert & Newton Way	W	2 Hours	12	39	14	6	1	1	0	0	0	0	61	1.5	5.1
			12	39	14	6	1	1	0	0	0	0	61	1.5	5.1
Main St. b/w Newton Way & 1st South	W	2 Hours	16	36	21	2	1	0	0	0	0	3	63	1.8	3.9
			16	36	21	2	1	0	0	0	0	3	63	1.8	3.9
Main St. b/w Hancock & Atlantic	E	2 Hours	11	35	5	5	1	2	0	0	0	0	48	1.5	4.4
			11	35	5	5	1	2	0	0	0	0	48	1.5	4.4
Main St. b/w Atlantic & Derby	E	2 Hours	5	10	11	1	0	0	0	0	0	0	22	1.6	4.4
			5	10	11	1	0	0	0	0	0	0	22	1.6	4.4
Main St. b/w Derby & Mt. Desert	E	2 Hours	5	15	6	1	1	0	0	0	0	1	24	1.8	4.8
			5	15	6	1	1	0	0	0	0	1	24	1.8	4.8
Rodick b/w Cottage & West	E	None	13	3	1	0	2	4	0	1	2	6	19	5.8	1.5
			13	3	1	0	2	4	0	1	2	6	19	5.8	1.5
			229	331	171	66	44	32	32	7	23	21	727	2.5	3.2

Note: Delivery truck and bus parking on the north side of West St. between Main & Rodick account for the 7 spaces occupied for 6 hours or more (highlighted in blue).

As indicated in the table, a number of spaces on the north side of West Street between Main and Rodick were occupied nearly continuously by tour buses or delivery trucks or were blocked off for those vehicles. This created durations of stay well in excess of the two hour restriction. However, these few anomalies did not skew the overall duration of stay pattern.

While it is valuable to understand the duration of stay for all of the surveyed spaces, it is perhaps more valuable to have a sense of the duration of stay at the spaces which are intended to be used for two hours or less. The goal of this analysis is to show whether or not the two-hour parking restriction and the enforcement of that restriction is having the desired effect.

Table 7 presents a summary of the duration of stay and turnover characteristics observed at the two-hour parking spaces only.

Table 7 – Duration of Stay and Turnover of 2-Hour Parking Spaces

Street Segment	Block Face	Restriction	Inventory	Vehicle Utilization	Length Of Stay (Hrs)	Vehicle per Space Turnover
West St. b/w Main & Rodick	N	2 Hours	15	41	2.6	2.7
West St. b/w Main & Rodick	S	2 Hours	10	41	2.0	4.1
			25	82	2.3	3.3
West St. b/w Rodick & Bridge	N	2 Hours	4	13	2.4	3.3
West St. b/w Billings & Rodick	S	2 Hours	14	79	1.5	5.6
			18	92	1.7	5.1
Main St. b/w Mt. Desert & Newton Way	W	2 Hours	12	61	1.5	5.1
			12	61	1.5	5.1
Main St. b/w Newton Way & 1st South	W	2 Hours	16	63	1.8	3.9
			16	63	1.8	3.9
Main St. b/w Hancock & Atlantic	E	2 Hours	11	48	1.5	4.4
			11	48	1.5	4.4
Main St. b/w Atlantic & Derby	E	2 Hours	5	22	1.6	4.4
			5	22	1.6	4.4
Main St. b/w Derby & Mt. Desert	E	2 Hours	5	24	1.8	4.8
			5	24	1.8	4.8
			92	392	1.8	4.3

Over the course of the survey period, 392 vehicles parked in the 92, 2-hour parking spaces within the study area, indicating each spaced turned-over about 4.3 times. Additionally, the average length of time each vehicle remained parked in a two-hour space was 1.8 hours. This was consistent with observations conducted in 2013.

Based on this information, it appears as though, on average, drivers are abiding by the two-hour parking restriction. Obviously, as demonstrated in Table 7, a number of vehicles did violate the two-hour time limit on parking.

As for the unrestricted on-street parking spaces, **Table 8**, following page, presents a summary of the duration of stay and turnover characteristics observed at these 137 spaces. Over the course of the survey period, 335 vehicles parked in the unrestricted parking spaces within the study area, indicating each spaced turned-over about 2.4 times. The average length of time each vehicle remained parked in a space was 3.3 hours, as compared to the 1.8 hour duration of stay at a 2-hour space.

The summary of these findings indicate that the majority of individuals parking curbside in the study area are visitors, not employees, as previously suspected. Based on these surveys it would appear that only Rodick Street currently attracts long duration parkers to the area.

Table 8 – Duration of Stay and Turnover of Unrestricted Parking Spaces

Street Segment	Block Face	Restriction	Inventory	Vehicle Utilization	Length Of Stay (Hrs)	Vehicle per Space Turnover
West St. b/w Rodick & Bridge	N	None	7	19	3.2	2.7
West St. b/w Bridge & Billings	S	None	12	39	2.7	3.3
			19	58	2.9	3.1
West St. b/w Bridge & Eden	N	None	53	117	3.4	2.2
West St. b/w Eden & Holland	S	None	27	75	3.1	2.8
West St. b/w Holland & Bridge	S	None	25	66	3.2	2.6
			105	258	3.3	2.5
Rodick b/w Cottage & West	E	None	13	19	5.8	1.5
			13	19	5.8	1.5
			137	335	3.3	2.4

Impact of Daily Parking Demand on Residential Streets

In response to the findings from the 2013 study, several Steering Committee members advanced the opinion that parking demand from the Town's core commercial district was advancing into predominately residential neighborhoods during periods of peak demand. Special concern was expressed for those areas south of Mount Desert Road and west of Main Street.

In order to test this hypothesis, it was necessary to try and differentiate between resident vehicles and visitor and employee vehicles. With no way to absolutely identify resident vehicles through a city sticker or resident parking permit, another method had to be devised. The solution was to conduct a series of counts of the number of vehicles parked on residential streets, with the initial count conducted at a time when it was presumed that most visitors and employees are not typically in Town (i.e. 5:00 AM). In theory, the vehicles parked on-street during the initial count would be associated with the adjacent residences, either as tenants or their guests. As vehicles accumulated throughout the course of the day, it was assumed that the additional cars belong to visitors and employees.

Additional counts were performed at noon, when inbound traffic to Town appeared to be at its peak, and again at 5:00 PM, the start of the traditional dinner hour. Comparisons of the establishing count to the noon count were anticipated to indicate peak accumulation of visitor vehicles during the course of the day. The evening count was an additional data point, in case peak demand in this area was driven by diners, as opposed to daytime visitors. The variance between the establishing vehicle count and the noon and evening counts were represent a general measure of how many visitors and/or employees were parking in the neighborhoods on a typical day.

Table 9, next page, presents the results of the occupancy surveys of the residential streets which were conducted at 5:00 AM, 12:00 PM and 5:00 PM. As shown in the table, during the establishing (5:00 AM) count, 85 vehicles were parked on the streets surveyed³. By noon, 145 vehicles were parked on the

³ All of which, presumably, belonged to residents living on those or adjoining streets.

same streets, an increase of 60 vehicles. At 5:00 PM, 137 vehicles were parked on the surveyed streets, a total of 52 more cars than during the early morning counts.

Table 9 – Occupancy Survey of Residential Streets

Street	Between	5:00 AM	12:00 PM	VARIANCE 5AM-12PM	5:00 PM	VARIANCE 12PM-5PM	VARIANCE 5AM-5PM
Newton Way	Main St. & School St.	6	10	4	9	-1	3
Des Isle Ave.	Newton Way & 1st South St.	7	7	0	7	0	0
1st South St.	Main St. & School St.	8	13	5	10	-3	2
Ledgelawn Ave.	Mt. Desert St. & Pleasant St.	13	31	18	42	11	29
School St.	Mt. Desert St. & 1st South St.	10	21	11	19	-2	9
Derby St.	Main St. & Elbow St.	1	11	10	10	-1	9
Elbow St.	Derby St. & Atlantic Ave.	0	0	0	0	0	0
Atlantic St.	Elbow St. & Main St.	11	15	4	13	-2	2
Roberts Ave.	Cottage St. & Mt. Desert	17	17	0	17	0	0
Greeley Ave.	Cottage St. & Cottage St.	12	5	-7	5	0	-7
Ballpark Lot		0	15	15	5	-10	5
	On-Street Total	85	145	60	137	-8	52

This data suggests that, at peak, 60 visitor and employee vehicles bleed into the residential neighborhoods of Bar Harbor in order to find available parking. Should the Town move to ban this use in the future for any reason – such as institution of a Residential Parking Permit program in these areas – the proposed solution would need to accommodate these vehicles in addition to the current parking shortfall (79 spaces) increasing the target net design capacity to 139 spaces⁴.

Impact of Policy Changes

In addition to the existing demand for public on- and off-street parking that would need to be accommodated at a new parking facility in order relieve pressure on existing parking facilities, two additional policy changes are being recommended that would contribute to the total peak parking demand that a new parking facility could be used to satisfy.

Steering Committee members have suggested that planned street improvements in Town could result in the elimination of curbside parking along Rodick Street between Cottage Street and West Street. Casual observations suggest this change is both necessary and warranted; the sidewalk along this street facing is heavily travelled and in poor condition and widening it would reduce risk for the Town and improve pedestrian traffic flow. Eliminating curbside parking would also improve safety and traffic flow for motorists along Rodick Street, particularly those parking on the private lots along the left hand side of the street. **This proposed policy change would result in the loss of 13 parking spaces which would need to be recovered in a proposed solution.**

The industry standard for a roadway supporting two-way vehicular travel and parallel parking along one side is 34' in width from sidewalk to sidewalk. These dimensions allow for a 6" off-set from each curb face, two 12' driving lanes and a 9' wide parking stall oriented along the path of travel. Field

⁴ With displacement of existing spaces, which is estimated at roughly 81 spaces, the total design target capacity is 220 spaces.

observations along the section of Mount Desert Road between School Street and Spring Street indicate that roughly 50 vehicles park on the north side of roadway on a typical weekday, despite the fact that the roadway appears to be substantially narrower than the 34' standard. (DESMAN would estimate the roadway is not more than 29' wide through this section, although that measurement has not been tested to date.) This condition imperils both parkers and passing motorists, as well as any bicyclists travelling through this area. DESMAN would strongly recommend that the Town Council consider banning this practice in the future. If this recommendation is implemented, the result would be the **elimination of approximately 50 parking spaces** which would need to be accommodated elsewhere.

Conclusions/Impacts on Design Capacity

It has been estimated that a proposed structure on the Backyard Lot site would eliminate roughly 81 parking spaces⁵, which would need to be recovered in a proposed parking structure at this location. Our latest field observations demonstrate the need for an additional 79 spaces across the study area, inflating the design target to 160 spaces. Incorporating parking for individuals currently parking on residential streets (60 cars) would increase the design target to 220 spaces. Adopting the recommendations to eliminate parking along Rodick Street between Cottage and West Streets (13 spaces) and Mount Desert Road between School and Spring Streets (50 spaces) **increases the target design capacity to 283 spaces under present day conditions.**

3. FUTURE DEMAND (2015-2020)

The future demand for parking in the Town of Bar Harbor will be impacted by a number of factors, the most obvious being changes in visitor volumes to the area. Any future growth in visitor volume will result in a natural growth in the demand for parking in Town.

In addition to this natural growth, there is the potential for planned redevelopment projects within the Town to contribute to increased parking demand. This is particularly true with developments that make use of currently-vacant space or ones that convert a building from a less-intense to a more-intense land use (e.g. repurposing a retail store into a restaurant).

The following section will examine the potential impacts of these factors on the future demand for parking in Bar Harbor, as well as presenting the total additional parking capacity necessary to satisfy this demand.

Natural Growth Assumption

As presented previously, based on observations of parking demand from August 2013 to August 2014, both weekday and weekend peak on- and off-street parking demand grew between 1% and 4%. In the area of Bar Harbor observed during the surveys, overall peak weekday demand grew from 1,247 spaces in 2013 to 1,267 spaces in 2014, a change of approximately 1.5%; overall peak weekend demand grew

⁵ It bears noting that there are actually a total of 154 parking spaces on the site between the public lot (66 spaces), the parking allocated to West Street Hotel patrons (67 spaces) and that signed for West Street Hotel employees (21 spaces) at the back of the lot. The 81-space displacement estimate arose out of the Option 2 design, which would absorb only those spaces used by the general public and hotel employees. An alternate design, which encompassed the pad facing Rodick Street, west of the private residence, could displace all 154 spaces.

from 1,228 spaces in 2013 to 1,266 spaces in 2014, a change of approximately 3.1%. For the purposes of our analysis, we have assumed a universal long-term natural growth rate of 2.0%. This is seen as more representative of future growth in visitor volumes and parking demand over the long-term.

Emerging Developments

As part of the process for determining the ideal size of a proposed parking garage, it was necessary to determine if there are any in-progress, planned or proposed development projects that could have an impact on the demand for parking in Bar Harbor and what the expected impact might be. Within the study area, the City identified a number of vacant lots and currently-vacant buildings which are likely to be developed or redeveloped in the near future. For the purposes of this study, we have assumed that all of the developments listed below will be completed within 5 years.

Table 10 – Emerging Developments

PARCEL ¹	STATUS	LOT/BUILDING SIZE (sf GFA)	ASSUMED LAND USE ALLOCATIONS				PERFORMING ARTS THEATRE (seats) ⁶
			FINE/CASUAL ² RESTAURANT (sf GLA)	FAST/CASUAL ³ RESTAURANT (sf GLA)	CAFÉ/TAKE-OUT ⁴ RESTAURANT (sf GLA)	STREET LEVEL ⁵ RETAIL (sf GFA)	
56 Cottage Street	Vacant Building	19,602	1,862	2,793	4,656	9,311	-
77 Cottage Street	Vacant Lot	9,584	910	1,366	2,276	4,552	-
124 Cottage Street	Vacant Lot	13,940	1,324	1,987	3,311	6,622	-
121 Cottage Street	Vacant Building	11,761	1,117	1,676	2,793	5,586	-
135 Cottage Street	Vacant Building	2,614	248	373	621	1,242	-
216 Main Street	Vacant Lot	13,939	1,324	1,986	3,311	6,621	-
35 Cottage Street	Criterion Theatre	11,761	-	-	-	-	880
TOTALS		83,201	6,785	10,181	16,968	33,934	880

Notes:

1. Program as provided by Town leaders.
2. Fine/Casual restaurants have full bar service and serve primary lunch & dinner service. DESMAN assumed 20% of all restaurant space would be Fine/Casual.
3. Fast/Casual restaurants provide wine & beer service and serve breakfast, lunch and dinner. DESMAN assumed 30% of all restaurant space would be Fine/Casual.
4. Cafés and take-out restaurants have limited seating, resulting in less intensive parking demand. DESMAN assumed 50% of all restaurant space would be Café or Take-Out.
5. Street-level retail includes soft goods and services, but excludes big box and 'destination' [i.e. anchor] stores.
6. Program assumes full translation of current seating capacity into a new facility promoting musical performances and touring theatre.

Aside from the Criterion Theater, DESMAN was instructed to assume that any new or redeveloped buildings will cover approximately 95% of the lot, will average two stories in height and that the overall square footage will be split roughly 50/50 between retail and restaurant. Based on this information, aside from the Theater, these development projects will yield 66,867 SF of new retail and restaurant.

DESMAN assumed that these developments will be supported by roughly 40 existing parking spaces associated with the vacant lots or buildings. DESMAN did not assume any inclusion of new parking facilities, as the Town code appears not to require parking to support new development in the central business district.

To determine the impact of these developments, DESMAN prepared a parking demand model using Shared Use methodology to project future parking demand. The foundation of this model was parking demand ration taken from several sources, as shown in **Table 11**, next page.

Table 11 – Parking Demand Ratios

Land Use	User Group	Weekday	Weekend	Unit	Source
Fine/Casual Dining	Customer	15.25	17.00	/ksf GLA	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
	Employee	2.75	3.00	/ksf GLA	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
Fast Casual Dining	Customer	9.00	12.75	/ksf GLA	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
	Employee	1.50	2.25	/ksf GLA	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
Café/Take Out	Customer	12.25	12.00	/ksf GLA	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
	Employee	2.25	2.00	/ksf GLA	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
Street Retail	Customer	2.90	3.20	/ksf GLA	Shared Parking: 2nd Edition . Washington DC: ULI - Urban Land Institute, 2005
	Employee	0.70	0.80	/ksf GLA	Shared Parking: 2nd Edition . Washington DC: ULI - Urban Land Institute, 2005
Performing Arts Theater	Customer	0.28	0.30	/seat	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004
	Employee	0.06	0.09	/seat	Parking Generation: 3rd Edition . Washington DC: ITE - Institute of Transportation Engineers, 2004

These demand ratios were adjusted to reflect for local conditions. For example, the most recent U.S. Census reports only 52.3% of surveyed employees in Bar Harbor drove to work by themselves; the remainder carpooled, walked, rode a bike or arrived by other means. Similarly, DESMAN estimated that roughly one in every three visitors (33%) coming into Bar Harbor arrived by bike, shuttle bus or means other than a single-occupant vehicle. These mitigating factors were applied to the base demand ratios as ‘modal adjustments’.

The model also reflected the percentage of patrons and employees that were ‘captive’ within town, living or staying near where they worked or visited and leaving their vehicles at home or their hotel, rather than driving around town. Based on casual observations and conversations with employees, business owners and visitors, DESMAN estimated that only one in every four (25%) visitors to higher end restaurants or retail stores and all employees were non-captive users coming from outside town and thereby driving in. Workers estimated that only one in every ten (10%) of café or take-out patrons were driving into town to patronize their business. DESMAN assumed that roughly 50% of performing art theater event patrons and 50% of theater staff would also be coming in from outside of town.

These mitigating factors were applied to the base demand ratios rendering a model specific to observed conditions in Bar Harbor, rendering projected parking demand for 182 vehicles on a weekday and 206 vehicles on a weekend, as shown in **Table 12**.

Table 12 – Gross Parking Demand

Land Use	User Group	Land Use Data	WEEKDAYS		WEEKDAY EVENINGS		WEEKEND DAYS		WEEKEND EVENINGS	
			Project Ratio	Vehicles	Project Ratio	Vehicles	Project Ratio	Vehicles	Project Ratio	Vehicles
Fine/Casual Dining	Customer	6,785 sf GLA	2.52 /ksf GLA	17	2.52 /ksf GLA	17	2.81 /ksf GLA	19	2.81 /ksf GLA	19
	Employee		0.72 /ksf GLA	5	0.72 /ksf GLA	5	0.78 /ksf GLA	5	0.78 /ksf GLA	5
Fast Casual Dining	Customer	10,181 sf GLA	1.49 /ksf GLA	15	1.49 /ksf GLA	15	2.10 /ksf GLA	21	2.10 /ksf GLA	21
	Employee		0.39 /ksf GLA	4	0.39 /ksf GLA	4	0.59 /ksf GLA	6	0.59 /ksf GLA	6
Café/Take Out	Customer	16,968 sf GLA	0.81 /ksf GLA	14	0.81 /ksf GLA	14	0.79 /ksf GLA	13	0.79 /ksf GLA	13
	Employee		0.59 /ksf GLA	10	0.59 /ksf GLA	10	0.52 /ksf GLA	9	0.52 /ksf GLA	9
Street Retail	Customer	33,934 sf GLA	0.48 /ksf GLA	16	0.48 /ksf GLA	16	0.53 /ksf GLA	18	0.53 /ksf GLA	18
	Employee		0.18 /ksf GLA	6	0.18 /ksf GLA	6	0.21 /ksf GLA	7	0.21 /ksf GLA	7
Performing Arts Theater	Customer	880 seats	0.09 /seat	81	0.09 /seat	81	0.10 /seat	87	0.10 /seat	87
	Employee		0.02 /seat	14	0.02 /seat	14	0.02 /seat	21	0.02 /seat	21
Subtotal Customers				143		143		158		158
Subtotal Employees				39		39		48		48
Subtotal Residents (Unreserved)				0		0		0		0
Subtotal Reserved				0		0		0		0
TOTAL				182		182		206		206

These parking demand projections were considered ‘gross’ in that they did not reflect variances in parking demand according to time of day or day of week for each of the different land uses, but rather assumes that all the land uses will experience peak demand at the same time. We know from common experience that this is an erroneous assumption; a café typically experiences peak demand mid-morning

on a weekday, while a performing arts theater would peak in the late evening on a Friday or Saturday night during a performance. These variances in parking demand by time of year, day of week and time of day are called 'presence' in Shared Use methodology. DESMAN applied the appropriate presence factors to the gross demand projections to render accurate peak hour parking demand projections for the emerging developments.

As shown in **Table 13**, DESMAN projects the emerging developments will need a total of 153 spaces (as opposed to 182) to satisfy their needs when all the projects are complete and open.

Table 13 – Peak Weekday Demand Projections

		WEEKDAYS												
Land Use	User Group	January 8:00 PM	February 8:00 PM	March 8:00 PM	April 7:00 PM	May 8:00 PM	June 8:00 PM	July 8:00 PM	August 8:00 PM	September 8:00 PM	October 7:00 PM	November 8:00 PM	December 8:00 PM	Holidays 8:00 PM
Fine/Casual Dining	Customer	2	2	2	3	9	16	17	17	9	3	2	2	2
	Employee	1	1	1	1	3	5	5	5	3	1	1	1	1
Fast Casual Dining	Customer	1	1	1	3	6	11	12	12	6	3	1	1	1
	Employee	0	0	0	1	2	4	4	4	2	1	0	0	0
Café/Take Out	Customer	1	1	1	2	4	7	7	7	4	2	1	1	1
	Employee	1	1	1	2	3	6	6	6	3	2	1	1	1
Street Retail	Customer	0	0	0	1	2	4	4	5	2	1	0	0	0
	Employee	0	0	0	1	1	2	2	2	1	1	0	0	0
Performing Arts Theat	Customer	0	0	0	13	41	78	80	81	41	13	0	0	0
	Employee	0	0	0	3	7	14	14	14	7	3	0	0	0
Subtotal Customers		4	4	4	22	62	116	120	122	62	22	4	4	4
Subtotal Employees		2	2	2	8	16	31	31	31	16	8	2	2	2
Subtotal Residents (Unreserved)		0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Reserved		0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		6	6	6	30	78	147	151	153	78	30	6	6	6

PEAK DAY/HOUR =

DESMAN projects the emerging developments will need a total of 187 spaces (as opposed to 206) to satisfy their needs when all the projects are complete and open.

Table 14 – Peak Weekend Day Demand Projections

WEEKENDS														
Land Use	User Group	January 7:00 PM	February 7:00 PM	March 7:00 PM	April 7:00 PM	May 7:00 PM	June 7:00 PM	July 7:00 PM	August 7:00 PM	September 7:00 PM	October 7:00 PM	November 7:00 PM	December 7:00 PM	Holidays 7:00 PM
Fine/Casual Dining	Customer	2	2	2	4	9	17	18	18	9	4	2	2	2
	Employee	1	1	1	1	3	5	5	5	3	1	1	1	1
Fast Casual Dining	Customer	2	2	2	4	11	20	20	21	11	4	2	2	2
	Employee	1	1	1	1	3	6	6	6	3	1	1	1	1
Café/Take Out	Customer	1	1	1	2	5	10	10	10	5	2	1	1	1
	Employee	1	1	1	2	4	8	8	8	4	2	1	1	1
Street Retail	Customer	1	1	1	3	7	13	13	14	7	3	1	1	1
	Employee	1	1	1	1	3	6	6	6	3	1	1	1	1
Performing Arts Theat	Customer	0	0	0	16	39	70	71	78	39	16	0	0	0
	Employee	0	0	0	4	11	20	21	21	11	4	0	0	0
Subtotal Customers		6	6	6	29	71	130	132	141	71	29	6	6	6
Subtotal Employees		4	4	4	9	24	45	46	46	24	9	4	4	4
Subtotal Residents (Unreserved)		0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Reserved		0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		10	10	10	38	95	175	178	187	95	38	10	10	10

PEAK DAY/HOUR =

Both projections include demand associated with a performance at the rehabilitated theater; excluding theater performances, the net peak projected parking demand from new development is 58 spaces on a weekday and 88 spaces on a weekend day. [The theater accounts for 95-99 vehicles for a performance, but these events will be infrequent enough that they do not warrant including this impact in the proposed capacity of a parking structure.] **In summary, accounting for the 40 existing spaces associated**

with the development parcels, an additional 48 spaces will be needed to accommodate future demand from new development at the peak hour.

Summary of Demands

Incorporating the impacts of current conditions, plus a 2.0% annual growth factor and unmet demand from future development, DESMAN recommends a target design capacity of 337 spaces according to the following calculations:

Spaces Needed to Address Current Shortfalls:	79
Spaces Displaced from the Existing Backyard Lots:	81
Spaces Displaced on Rodick Street:	13
Spaces Needed for Displaced Vehicles from Residential Areas:	60
Spaces Displaced from Mount Desert Street policy change:	50
Spaces Needed for Future Development	44
<u>Spaces To Support Future Growth (2020)</u>	<u>10</u>
MINIMUM SPACE CAPACITY OF PROPOSED GARAGE:	337

4. OPTIONS AND ALTERNATIVES

As part of this phase of study, DESMAN was charged with evaluating the capacity of the proposed designs for the Backyard Lot against the refined projections of parking need and other options for addressing parking need. The following section addresses this charge.

Backyard Lot (Option 2)

The Phase 1 Study produced two design concepts: *Option 1* - which spanned the full length and breadth of the site, straddling the single-story private residence in the middle of the site – and *Option 2* – which was restricted to the block's core, preserving the pad fronting Rodick Street for future development into a higher, better land use. Since the conclusion of that study, the private residence which split the site has become available, negating the need for Option 1.

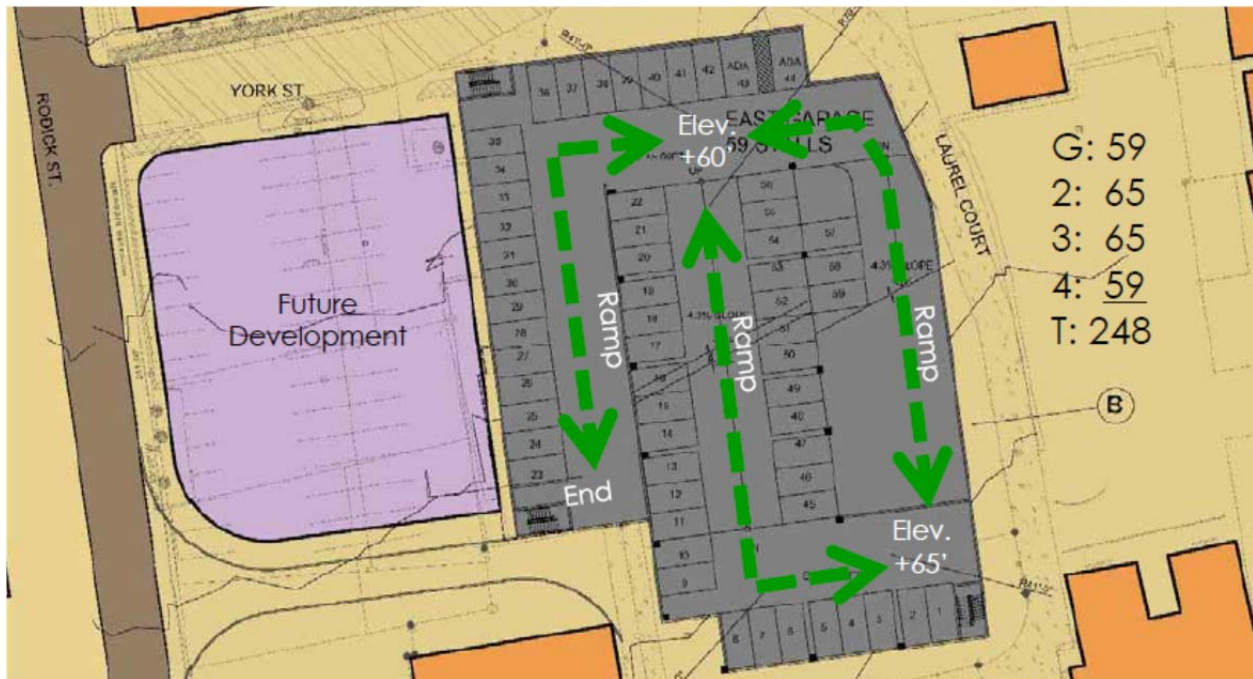
As shown in **Figure 3**, next page, Option 2 can support 248 spaces over four floors. Assuming a base construction cost of \$52.50 per square foot⁶, the structure would cost \$5,530,875 or roughly \$22,300 per space in total hard costs.

There are a number of merits to this option, including the following:

1. The location is well-situated to serve the locus of activity in town core, including the waterfront and a rehabilitated Criterion Theater.
2. The design concept preserves the pad fronting Rodick Street for higher, better land uses such as retail, hotel and/or restaurant which will generate strong property tax revenues and improve the property values of adjacent properties.
3. The structure would be 'masked' by surrounding buildings, mitigating any negative aesthetic impacts on the surrounding area.

⁶ Per R.S. Means 2014 for the Maine marketplace.

Figure 3 – Option 2 Illustration



There are also a number of challenges with this option, including:

1. The design falls 89 spaces short of the design target (337 spaces).
2. The site is poorly situated to address businesses and/or parking shortfalls on the south side of downtown.
3. If the spaces (67) lost to developing the parcel fronting Rodick Street have to be recovered in the new structure, the net gain for this option is just 100 spaces, enough to accommodate current parking shortfalls and the loss of parking along Rodick Street, but not the displacement along Mount Desert Road and the neighborhoods on the south side of the town.
4. The option does not have adequate capacity to service any future demand.

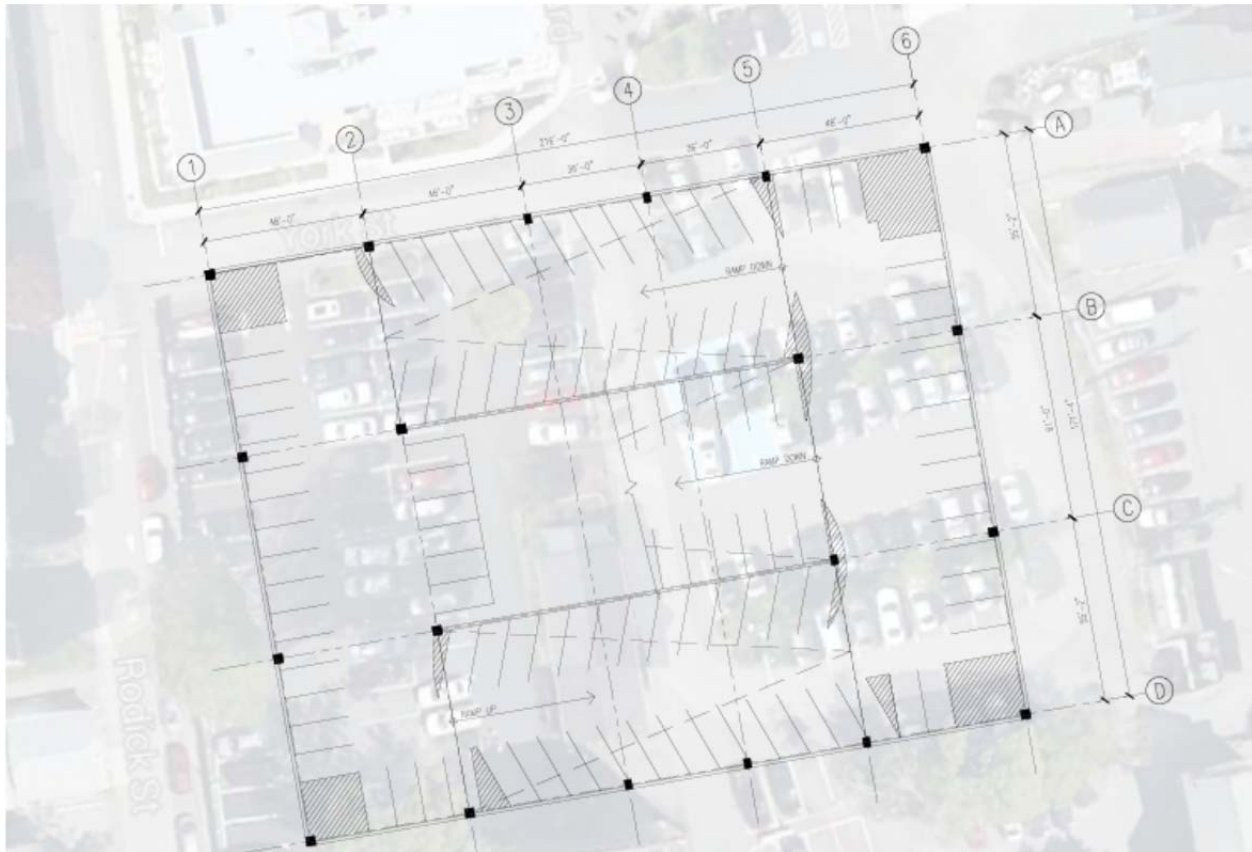
Backyard Lot (Full Site Concept)

DESMAN also developed a conceptual design which would utilize the entire site for a parking structure, allowing for preservation of current easements for truck deliveries and the like. This concept, measuring roughly 216' x 171', could provide roughly 110 spaces at grade and 123 spaces on each supported level, although it would also displace a total of 154 existing spaces.

Assuming a three-story height limit, to keep scale with the surrounding buildings, the structure would have a gross capacity of 356 spaces⁷. With a total of 111,022 square feet, the proposed structure would support an efficiency of 311 square feet per space and a total cost of \$5,828,602.50 or roughly \$16,372.50 per space in base construction costs.

⁷ The structure could be increased by an additional floor to achieve a gross capacity of 479 spaces and a net gain of 325 spaces after displacement at an additional cost of \$1,942,867.50.

Figure 4 – Backyard Lot Full Site Concept



The concept would nearly meet the capacity target (337 spaces) for a solution, although the net gain (202 spaces) would only address existing conditions in the system; any demand from future development could not be accommodated by this option as currently conceived. (Adding a fourth level would net an additional 123 spaces, which would be more than enough to meet future needs.)

This option benefits from the site location, putting a large reservoir of parking within easy walking distance of the waterfront and main of the restaurants and shops that draw tourists to Bar Harbor. As with the prior design, the site is poor for accommodating those businesses along Mount Desert Road or lower Main Street. Unlike the prior option, this structure will not be 'hid' behind abutting buildings and does not offer opportunities for developing higher, better land uses fronting Rodick Street.

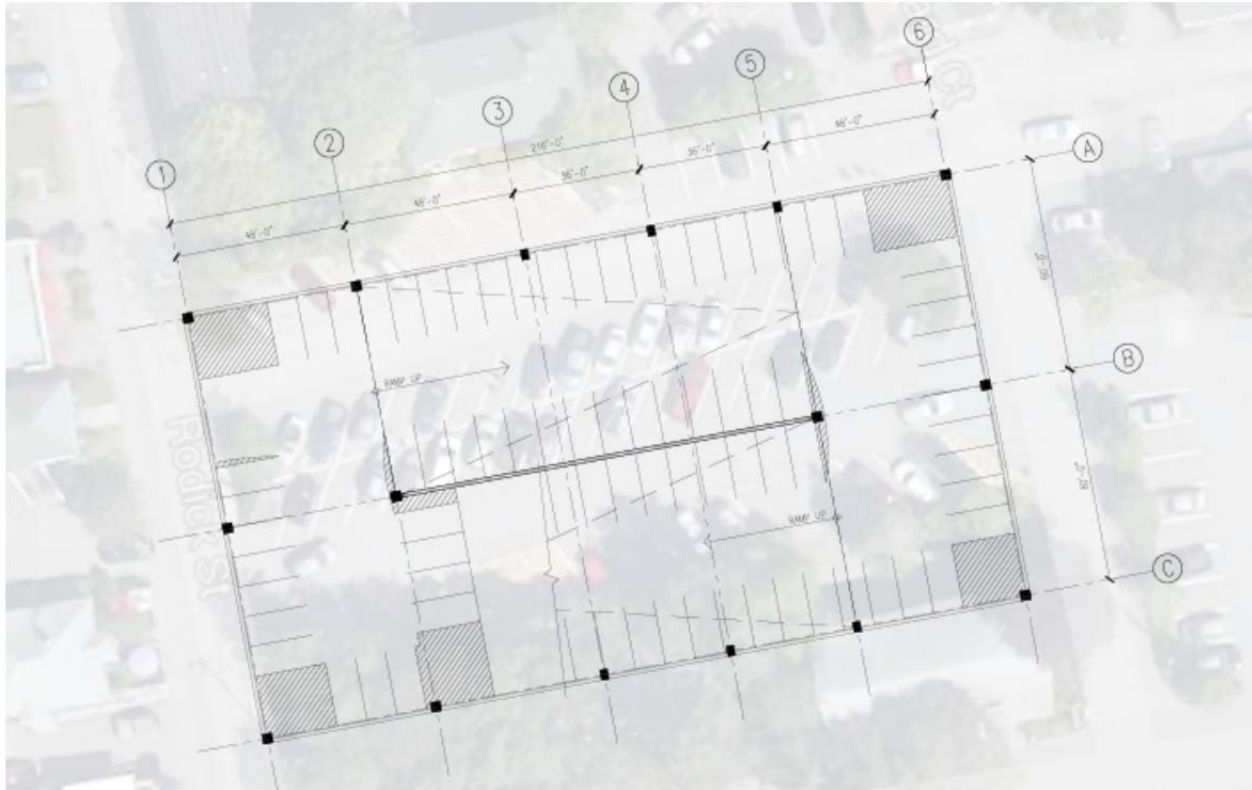
The concept does preserve all the existing easements and right-of-ways around the site allowing truck deliveries to abutting businesses and buildings.

Rodick Place Concept

As an alternative, DESMAN examined the feasibility of building structured parking over the site of the current Rodick Place lot. This concept would displace roughly 50 spaces located between Rodick Street, Rodick Place and Everard Court, adjacent to the Dog & Pony Tavern. The 216' x 120' footprint would result in a 77,760 square feet over three levels with a total gross gain of 257 spaces (net gain of 207 spaces) and an estimated efficiency of 303 square feet per space. Applying a standard cost rate of

\$52.50/square foot, DESMAN estimates the concept would require \$4,082,400 or roughly \$15,885 per space in hard construction costs.

Figure 5 – Rodick Place Concept



The Rodick Place Concept site benefits from both displacing fewer existing spaces and being better positioned to service both the north and south ends of town. The site would be more attractive to those individuals parking in the residential neighborhoods south of Mount Desert Road and would have a better chance of capturing those parkers displaced when the Town Council prohibits parking along Mount Desert Street west of the Town Square.

As with the prior options, the net gain from this option (207 spaces) is only adequate to address current conditions; demand from future growth and development in the area could not be satisfied by the capacity of this structure. The building's footprint may encroach on abutting neighbor's lot lines, requiring a negotiated easement to move forward with refined design and construction.

The sole point of access would be off Rodick Street, which is currently not designed to carry a major vehicle load and may require improvement to support the structure. Finally, while the site is centrally located, it is well off the main arterial roadways feeding vehicles into the central business district which could make it difficult for casual visitors to find without ample wayfinding signage.

Ferry Terminal Intercept Facility

The currently idle Ferry Terminal located on Eden Street roughly 1.5 miles from the downtown core has adequate surface capacity to park ~ 380 vehicles. The majority of inbound vehicular traffic into town passes this location to access the central business district, making it an ideal location for an intercept facility. The Town would need to invest some capital funds initially to improve the site (resurfacing and restriping, signage, lighting and rehabilitation of the existing facilities to create an appropriate collection point for visitors waiting for a shuttle), but DESMAN estimates this one-time cost to be less than \$500,000⁸. Additionally, the Town would need to spend roughly \$50,000 per year to promote the alternative through various media channels.

Figure 6 – Ferry Terminal



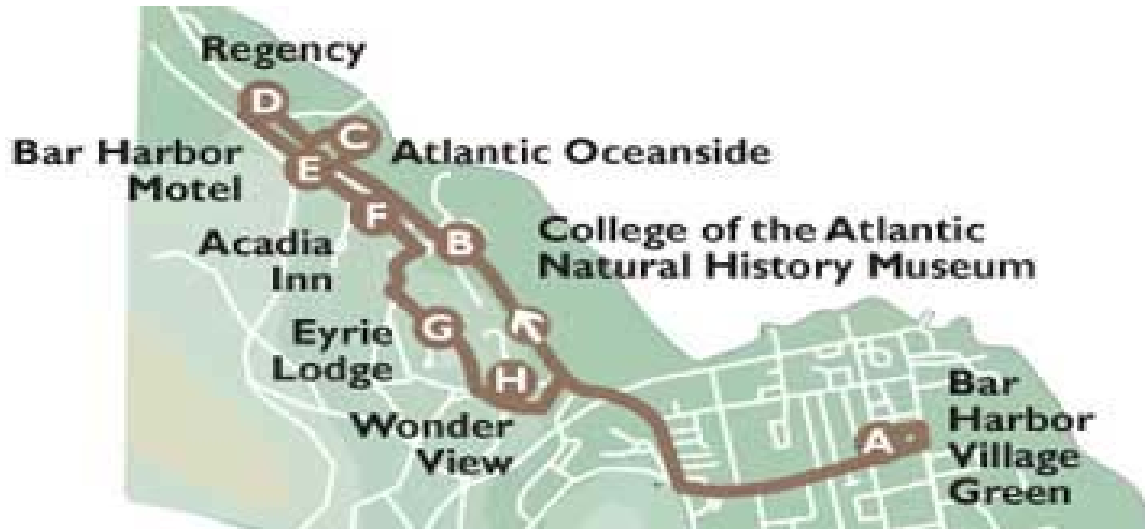
There is already existing transit service – the Island Explorer’s Eden Street route – that could provide 20-30 minute headways between this location and the central business district. This route departs the Village Green every 30 minutes from 6:45 AM until 3:15 PM and then every 15 minutes from 3:15 PM until 10:00 PM when the service shuts down for the evening. As **Figure 7** on the following page shows, the current route stops on either side of the Ferry Terminal.

There are two principle liabilities associated with this option. First, and foremost, conceptual plans show the current area that could be used for parking being redeveloped for other uses sometime after the

⁸ This cost estimate doesn’t include land acquisition and/or lease costs, which are yet to be determined. As DESMAN understands it, the site is currently owned by the Canadian government who is engaged in negotiations with the Town of Bar Harbor to acquire the facility with the objective of redeveloping the site to cruise ship terminal. A bond for \$3,000,000 has been cited in media reports, but it is unclear how much of this would be attributable to the parking area.

terminal is acquired to retrofit the facility to service cruise ships; a parking facility developed at this location could be on a temporary facility, depending on the speed of redevelopment.

Figure 7 – Eden Street Shuttle Route



Secondly, while the site could support up to 380 cars, there is no guarantee it will capture that many vehicles. Route 3 is not the only approach to Bar Harbor and visitors may bypass the facility in favor of the other routes. Additionally, while the site is conveniently located right off Eden Road and well served by the existing shuttle system, it is not as convenient as parking in the core of downtown, so the facility's capacity may not equal its capture, meaning that roughly half of the facility's capacity (190 vehicles) worth the demand would be removed from Bar Harbor's core.

Based on Maine DOT vehicle volume estimates for traffic coming into Bar Harbor off major arterials and estimated headways for existing transit service, DESMAN estimates the facility will only capture a maximum of 150 vehicles at the peak hour, if both parking and transit are free of charge. For each dollar of charge for either parking or transit service, DESMAN estimates peak hour utilization will decline by 15-20%.

Gateway Center Intercept Facility

The Federal Transit Administration, in cooperation with the National Park Service, Maine Department of Transportation, the Town of Trenton (ME), the Friends of Acadia, and Downeast Transportation, Inc., collaborated to construct the Acadia Gateway Center. The facility was designed to serve as a visitor welcome center, public transportation hub, and bus maintenance facility. The goals of the project were to reduce traffic congestion on the Route 3 corridor and in Acadia National Park by attracting visitors and commuters to the Island Explorer Transit System and other transportation alternatives. This project has been developed outside the park's boundary along State Highway 3, approximately two miles north of the Trenton/Bar Harbor airport on a 369-acre property is bisected by Crippens Brook. It is strategically located to intercept traffic traveling south on Route 3 before arriving onto Mount Desert Island.

The facility is to be constructed in four phases:

- *Phase One*, completed in 2012, includes the construction of a bus maintenance and storage facility, commuter park and ride lot, access road and related utilities.
- *Phase Two*, which has been designed but not yet funded, includes construction of the intermodal center, a portion of the National Park Service welcome center, which will serve at the transfer point for visitors exiting their cars and boarding the Island Explorer.
- *Phase Three* includes construction of the remainder of the National Park Service welcome center. Preliminary designs have been completed, but there is no timeline on when the project will initiate construction.
- *Phase Four* includes a National Park Service theater building and an ancillary use building, which could be used to support local businesses. There is currently no funding or timeline for this phase of work.

Figure 8 – Gateway Center Concept



DESMAN visited this project in August 2014 and noted that there is a ~ 200 space surface parking lot with bus shelter already in place (shown in **Figure 8**), and functional, adjacent to the bus maintenance facility. This facility is set some distance back from Route 3 and the site itself is currently poorly identified, but the site is wired to allow for the installation of dynamic, programmable signage along

Route 3 and the parking facility could easily be put into service with a nominal investment in trailblazing signage to direct drivers off the arterial and into parking. The current bus shelter (shown in **Figure 9**) appears immediately serviceable but would require the installation of dynamic signage to inform users of the arrival time of the next shuttle servicing the site.

Figure 9 – Shelter and Signage



The site could be serviced by existing Island Explorer service (Campground Route, shown in **Figure 10**) which provides service to the village center in Bar Harbor every 30 minutes from 8:20 AM until 10:00 PM, as well as originating shuttles at 6:55 and 7:55 AM. The run between the Gateway Center and the Village Green is roughly 50 minutes with eight (8) intervening stops.

Figure 10 – Campground Route



DESMAN estimates it will require an initial investment of roughly \$200,000 to install appropriate wayfinding signage along Route 3, trailblazing signage along the drive connecting Route 3 with the existing parking lot and dynamic signage adjacent to the existing shelter to inform waiting passengers of the next shuttle's location and estimated time of arrival. In addition, DESMAN estimates the Town would need to spend approximately \$150,000 per year for media promotions (i.e. television and radio advertisements, establishment and maintenance of an informational website, production and distribution of print materials, etc.) in order to make park visitors aware of the option and promote it as a viable alternative. Even with this promotion, DESMAN estimates the option will reduce parking demand in the Town's core by no more than 100 vehicles per day.

Biking Initiatives

The Town of Bar Harbor has investigated the potential of eliminating some on-street parking in the past to create better bikes lanes as shown in **Figure 11**.

Figure 11 – Proposed Roadway Reconfiguration to Support Installation of Bike Lanes



DESMAN fully supports this initiative as a means to reduce parking demand in Town, mitigate roadway congestion and promote environmentally responsible and sustainable alternatives to single-occupant vehicle travel. However, it is our opinion that these initiatives cannot substantially correct current

parking supply shortfalls or address future needs adequately to be considered a sole-source solution. Rather reconfiguration of roadways to better support bicycle and pedestrian travel should be considered and given priority as part of every roadway improvement project executed in or around Bar Harbor in the future.

5. OFF-SEASON USES

As has been noted in prior discussions with Town leadership, DESMAN does not project a market for a facility as a commercial parking operation outside the summer season; demand across the Town falls too significantly to 'drive' users into a facility after Labor Day. This is not to say a proposed parking structure in Town would not capture some elective use, especially during periods of inclement weather, but certainly not enough to generate adequate revenues to cover operating expenses or debt service.

Assuming standard floor-to-ceiling clearances of 7.5' throughout a proposed facility, DESMAN believes a parking structure could invite off-season use as a long-term storage facility for cars, small watercraft and motorcycles. A review of rates for comparable services offered at storage facilities in the area suggests the Town could charge \$50.00-\$75.00 per month for unheated but covered off-season storage for cars, trucks, boats, small craft, small recreational vehicles, motorcycles and the like. DESMAN believes the Town could attract up to 30 of these users each off-season, with an annual value of between \$13,500 and \$20,250, depending on pricing.

There are also a variety of vendors in the area that offer general storage as well. These are primarily businesses selling storage space in secured, enclosed facilities with or without climate control. The going rate for a 10' x 20' unit, which is roughly equivalent to the dimensions of a single parking space, is between \$90.00 and \$180.00 per month. These units are typically suitable for storing virtually any item not sensitive to fluctuations in temperature, including household wares, records, equipment and other sundries.

Without significant modification to a parking structure to accommodate this function, the Town could not offer comparable accommodations for individuals seeking off-season storage; to do so would require erecting fixed walls around the perimeter of parking stalls used to this purpose, which would negate any fiscal benefit. Depending on the dimensions of a unit, the Town may be able to accommodate portable storage 'pods' of 7' or less in height within the structure, but again the cost of procuring and transporting these units would mitigate any net fiscal benefit to the Town. The Town may be able to attract a limited number of individuals seeking covered, but laterally exposed, off-season storage for items such as recreational equipment, fishing gear, lawn furniture or similar items. DESMAN believes the Town could command a rate of \$45.00 per month per 9' x 18' stall from up to 20 individuals, commanding an annual net revenue of roughly \$8,100.

6. SUMMARY

As DESMAN has demonstrated, there is a significant need for additional parking in Bar Harbor to accommodate peak season activity. The area currently experiences a peak hour shortfall of 79 spaces at the peak hour of a busy summer weekday under existing conditions. If the Town were to elect to ban parking along Mount Desert Road to improve driver, bicyclist and pedestrian safety, this deficit would be compounded by an additional 50 spaces. Eliminating parking along Rodick Street between Cottage and West Streets would eliminate 13 parking spaces from the public inventory, but allow for better

pedestrian and vehicular flow. Instituting a residential parking permit program to prevent tourists and area employees from parking in residential neighborhoods would add another 60 spaces to the projected shortfall. In total, the Town could need as many as 202 additional parking spaces immediately, without calculating for those spaces displaced by construction of a parking facility. In addition, new construction could increase the Town's need by an additional 44 spaces and natural growth could compound existing shortfalls by an additional 10 spaces over the next decade, increasing the target capacity to 256 spaces; again, before calculating the impact of displacing existing parking spaces to develop a solution.

DESMAN has addressed a total of six options, shown in **Table 15**, for addressing these shortfalls. As the table shows, only the full-site option at the Backyard Lot with four-stories has the capacity to meet the full needs of the Town over the next decade. If the Town decides to adopt all recommended policy changes and address all needs proactively, this option is the best alternative for addressing the Town's needs as outlined.

Table 15 – Summary of Options and Alternatives

Option/Alternative	Gross Capacity	Net Capacity	Hard Cost	Soft Cost ⁴	Total Cost	Cost/ Gross Space	Cost/Net Space	Annual Debt Service ^{5,6}
Backyard Lot (Option 2)	248	167	\$ 5,530,875	\$ 1,106,175	\$ 6,637,050	\$ 26,762	\$ 39,743	\$ 488,366
Backyard Lot (Full Site 1)	356	202	\$ 5,828,602	\$ 1,165,720	\$ 6,994,322	\$ 19,647	\$ 34,625	\$ 514,655
Backyard Lot (Full Site 2) ¹	479	325	\$ 7,771,469	\$ 1,554,294	\$ 9,325,763	\$ 19,469	\$ 28,695	\$ 686,206
Rodick Place Concept	257	207	\$ 4,082,400	\$ 816,480	\$ 4,898,880	\$ 19,062	\$ 23,666	\$ 360,468
Ferry Terminal Intercept ²	380	190	\$ 500,000	\$ 100,000	\$ 600,000	\$ 1,579	\$ 3,158	\$ 50,000
Gateway Center Option ³	200	100	\$ 200,000	\$ 40,000	\$ 240,000	\$ 1,200	\$ 2,400	\$ 150,000

Notes:

1. This option assumes a four-story structure, which would rise roughly 10' above the surrounding buildings.
2. Estimated capacity, after resurfacing and restriping, is 380 spaces with a 50% capture rate (190 vehicles per day).
3. Estimated capacity is 200 spaces with a 50% capture rate (100 vehicles per day).
4. Soft cost is equivalent to 20% of hard costs for design and construction administration services, financing, insurance and contingencies.
5. Debt service for parking structures is calculated at 4.0% APR over a 20 year term. Debt service shown for intercept facilities is the actual annual expense for promotional support, as it was assumed the Town could pay for capital improvements 'out of pocket'.

Should the Town determine that certain policies need not be adopted, the target design requirement would be significantly lesser and one of the smaller alternatives may be viable. This determination must be made before DESMAN can proceed with the final phase of study to determine the financial feasibility of a selected option.

Ultimately, the Town must select an option based on the values, objectives and considerations of its constituents. As DESMAN understands these, the Gateway and Ferry Terminal options, while both fiscally attractive, are viable only as a mitigating factors and not a whole solution. While either of these options would allow the Town to deflect some parking demand outside its borders, both are dependent on the agreement and collaboration of Downeast Transportation and the many partners involved in the Island Explorer to assure the option's success, as well as aggressive promotional campaigns to make visitors aware of these options.

Among the structured options, those associated with the Backyard Lot appear to be more expensive, but also more viable as the site will support an efficient design without impacting abutter's easements and

access, both of which will be compromised and will require negotiation and compensation to move forward with the Rodick Place option. As to the value of one design option over another, the Town must make a determination of whether the more efficient design, but loss of development potential, is worth the proposed cost.

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