

# City of Mt. Lebanon

## Parking Planning Study and Analysis

### Overview

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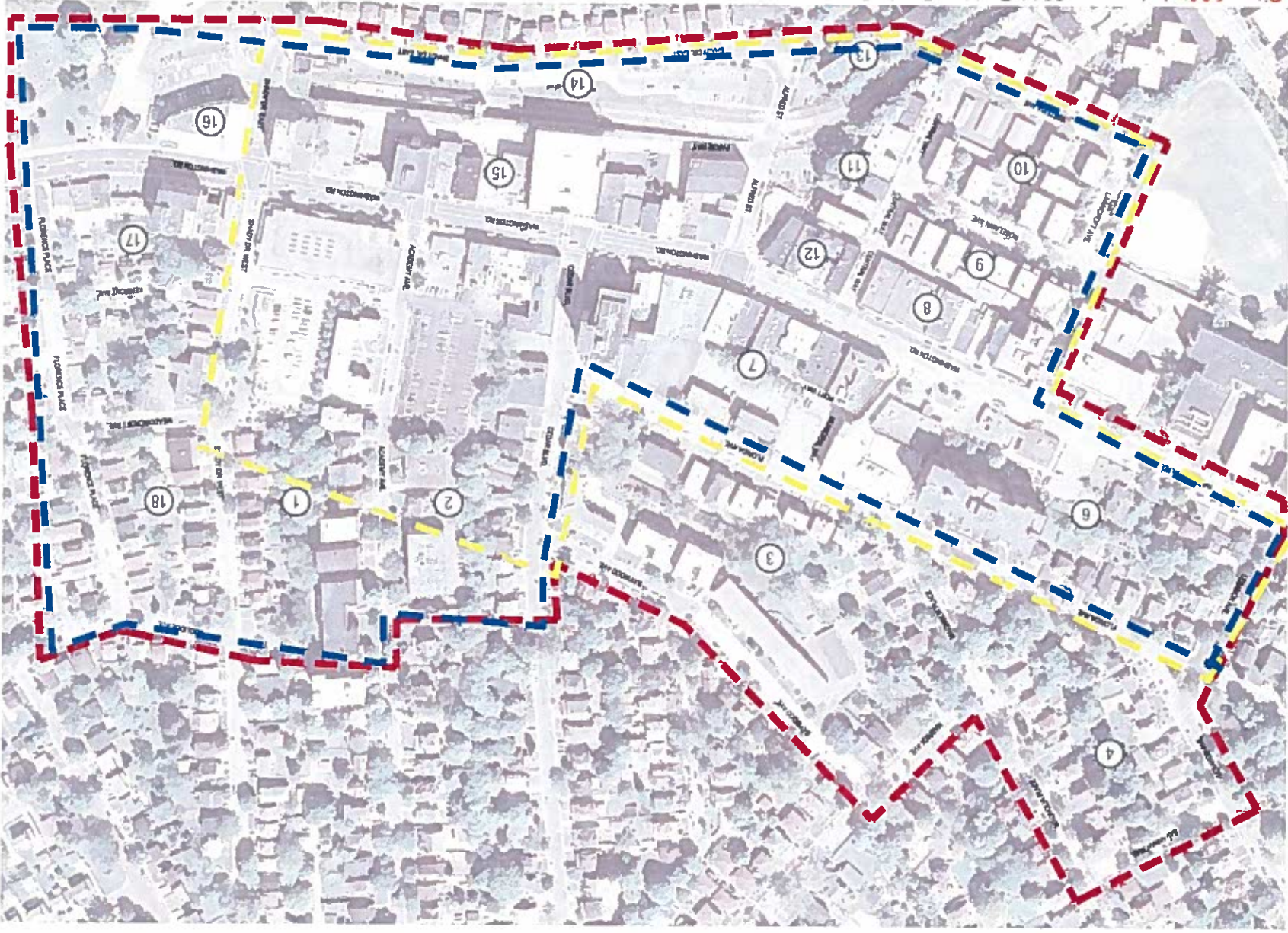
# Introduction



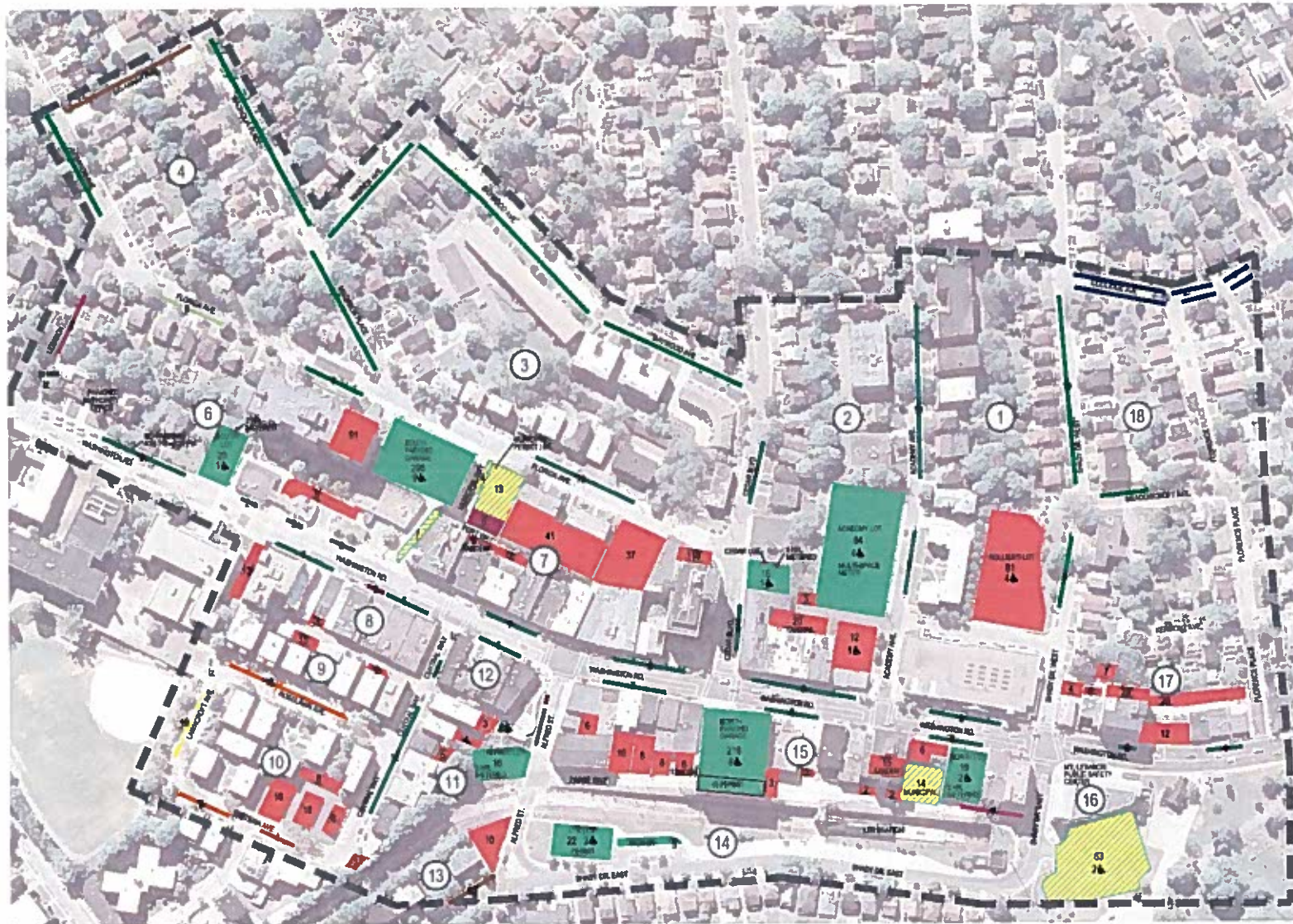
- Purpose to evaluate use of existing parking to determine if current supply adequately meet current & future demand
- Work included data collection, utilization studies, on-line surveys of stakeholders and review of other planning reports /documents provided by the client
- Result is a parking demand model to be used as a guide to making decisions regarding parking and future development
- Recommendations include system and management improvements as well as long term capital investment

# Study Area

- 2010
- 2001
- 1978 & 1981



# Parking Supply



**Public Parking**  
1,144 Spaces  
**63%**

**Private Parking**  
674 Spaces  
**37%**

**Best Practice**  
**+50% public control**

# Parking Utilization Analysis

- Conducted to determine how the parking system is operating
- Counts conducted of public & private spaces every two hours
- Turnover is a measure of the number of vehicles that occupied a space during the day
- Occupancy is an assessment of levels of parking usage during the day
- Analysis conducted on a Thursday between 8:00 am and 9:00 pm

# Parking Utilization Analysis

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## Turnover Analysis

- Overall vehicle turnover observed was good
- 84% of vehicles parked for less than 2 hours
- Exception:     10% parked between 2 and 4 hours  
                    6% parked longer than 4 hours

# Parking Utilization Analysis

- Peak Average Occupancy 71% between 2:00 pm & 4:00 pm

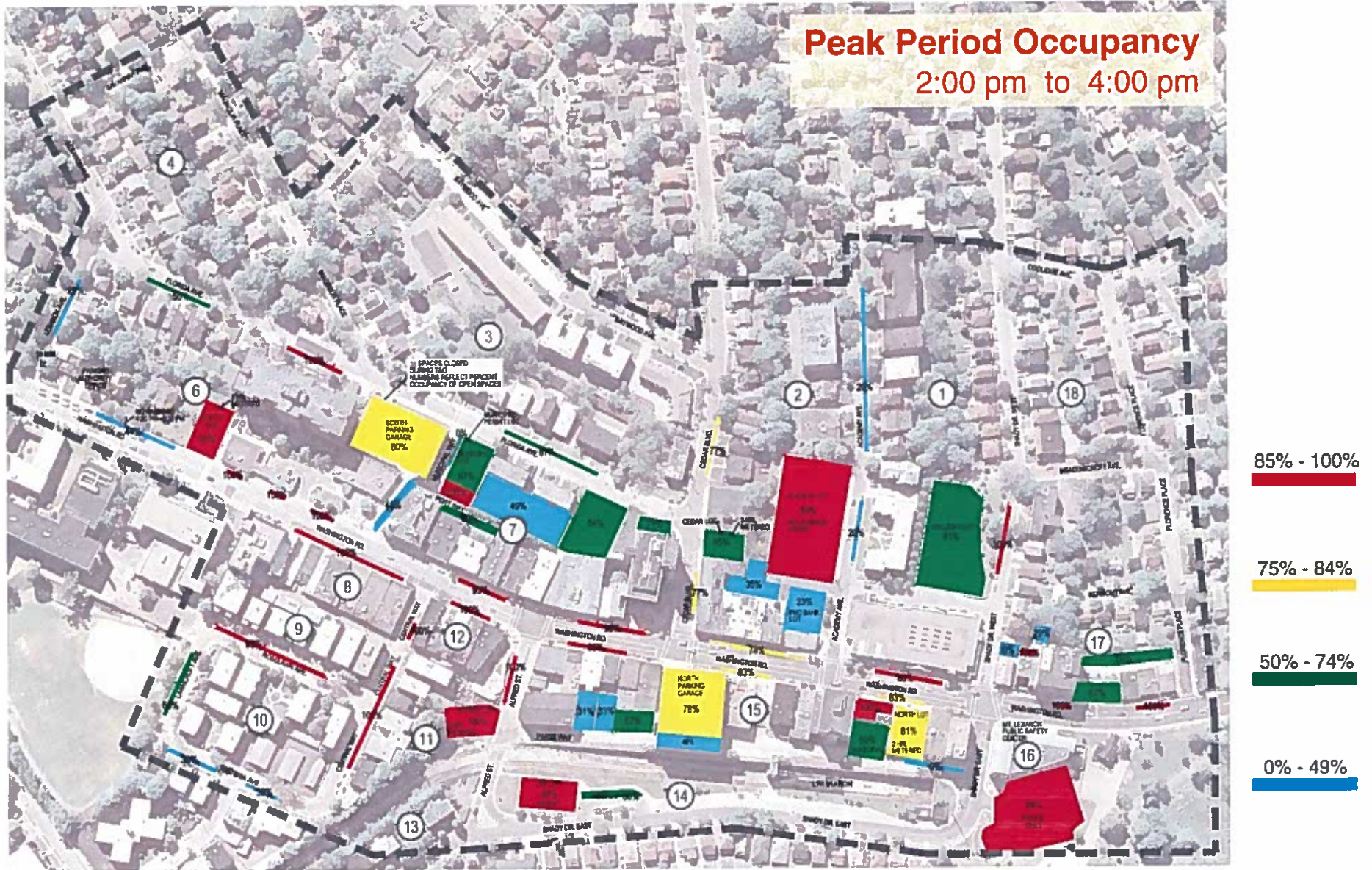
Public on-street & off-street.....77%

Private off-street.....71%

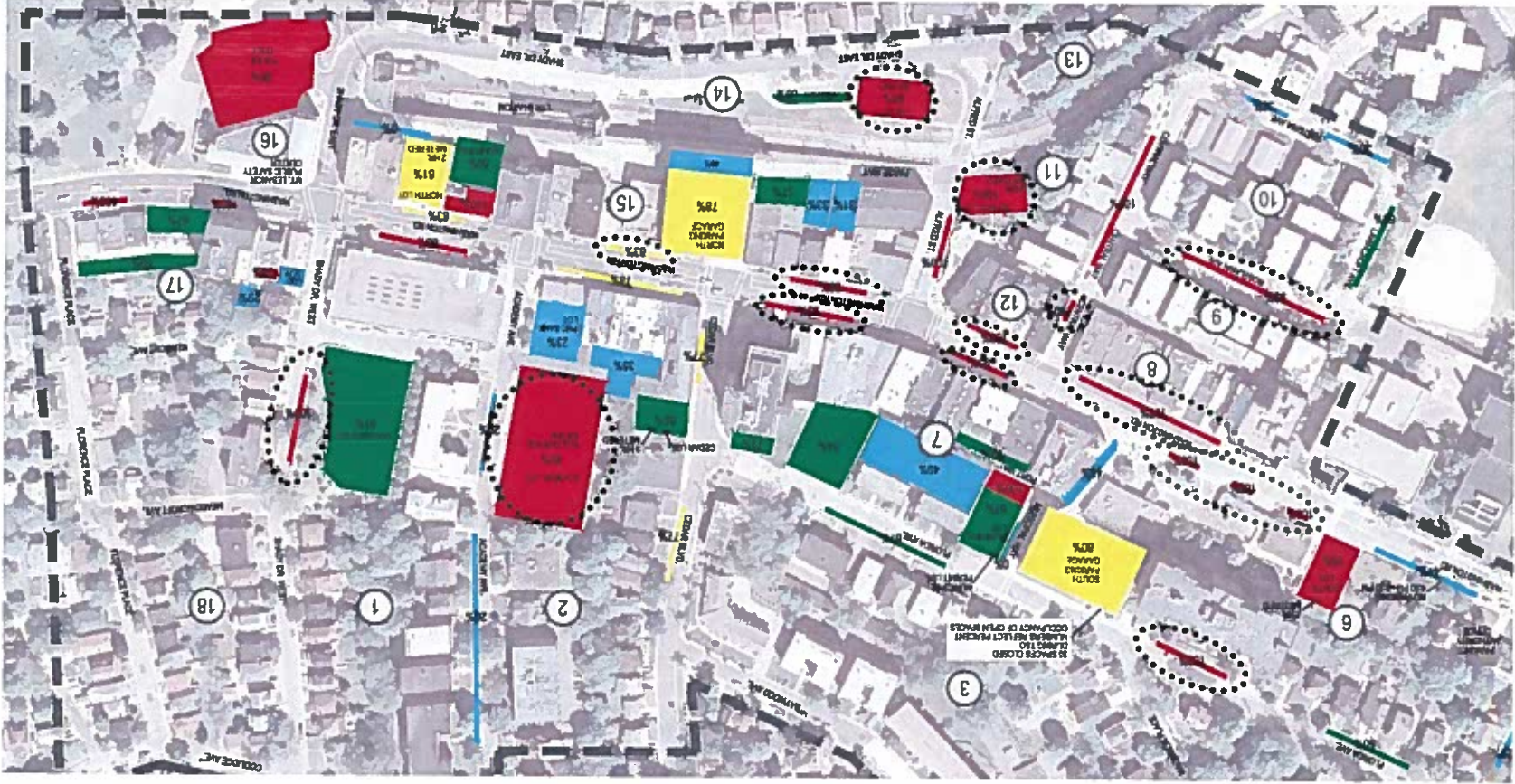
Occupancy Summary												
Description	# of Spaces	8:00am - 10:00am	10:00am - 12:00pm	12:00pm - 2:00pm	2:00pm - 4:00pm	4:00pm - 6:00pm	6:00pm - 9:00pm	% Occ.	% Occ.	% Occ.	% Occ.	% Occ.
Public On-Street Totals	232	77	138	146	165	128	171	55%	74%	74%	74%	74%
Public Off-Street Totals	849	449	599	629	667	554	464	65%	55%	55%	55%	55%
Public Combined	1081	526	737	775	832	682	635	63%	59%	59%	59%	59%
Private Off-Street Totals	429	138	240	214	247	230	89	54%	21%	21%	21%	21%
Overall Totals	1510	664	977	989	1079	912	724	60%	48%	48%	48%	48%



# Parking Utilization Analysis



# Parking Utilization Analysis



14 public parking areas where occupancy was greater than 85% for 4 or more hours

# Parking Demand Analysis



- Inventory and review of existing parking supply
- Utilization analysis of existing supply
- Block by block analysis of land-uses
- Parking generation ratios developed specific to Mt. Lebanon
- Future demand projected based on known developments & potential re-occupancy levels of existing land-uses

# Parking Demand Analysis

## Parking Generation Ratios Comparison

Parking Ratios (Parking stalls per 1,000 gross square feet unless otherwise noted)	City of Mt. Lebanon Zoning Code	Institute of Transportation Engineers	Established for Mt. Lebanon Day	Established for Mt. Lebanon Night
Office	3.0	2.79	2.56	0.30
Medical Office	5.0	3.53	3.75	0.30
Retail	2.0	3.97	2.22	0.30
Mixed Use	N/A	N/A	2.35	0.30
Service	N/A	3.6	2.20	0.30
Restaurant	4.0 carryout 10.0 with drive thru 12.0 sit down only	12.49	5.00	10.00
Residential – Multi family (per unit)	1.0 / 1 bed 2.0 / 2 bed	1.20 / unit	0.75 / unit	1.15 / unit
Theatre (per seat)	.25 / seat	0.19 / seat	0.08 / seat	0.26 / seat
Government	3.0	3.83	2.56	0.30
Hotel	1.0 / room	1.01 / room	.68 / room	1.00 / room
Commuter	N/A	0.49 / boarding	0.30 / boarding	0.19 / boarding

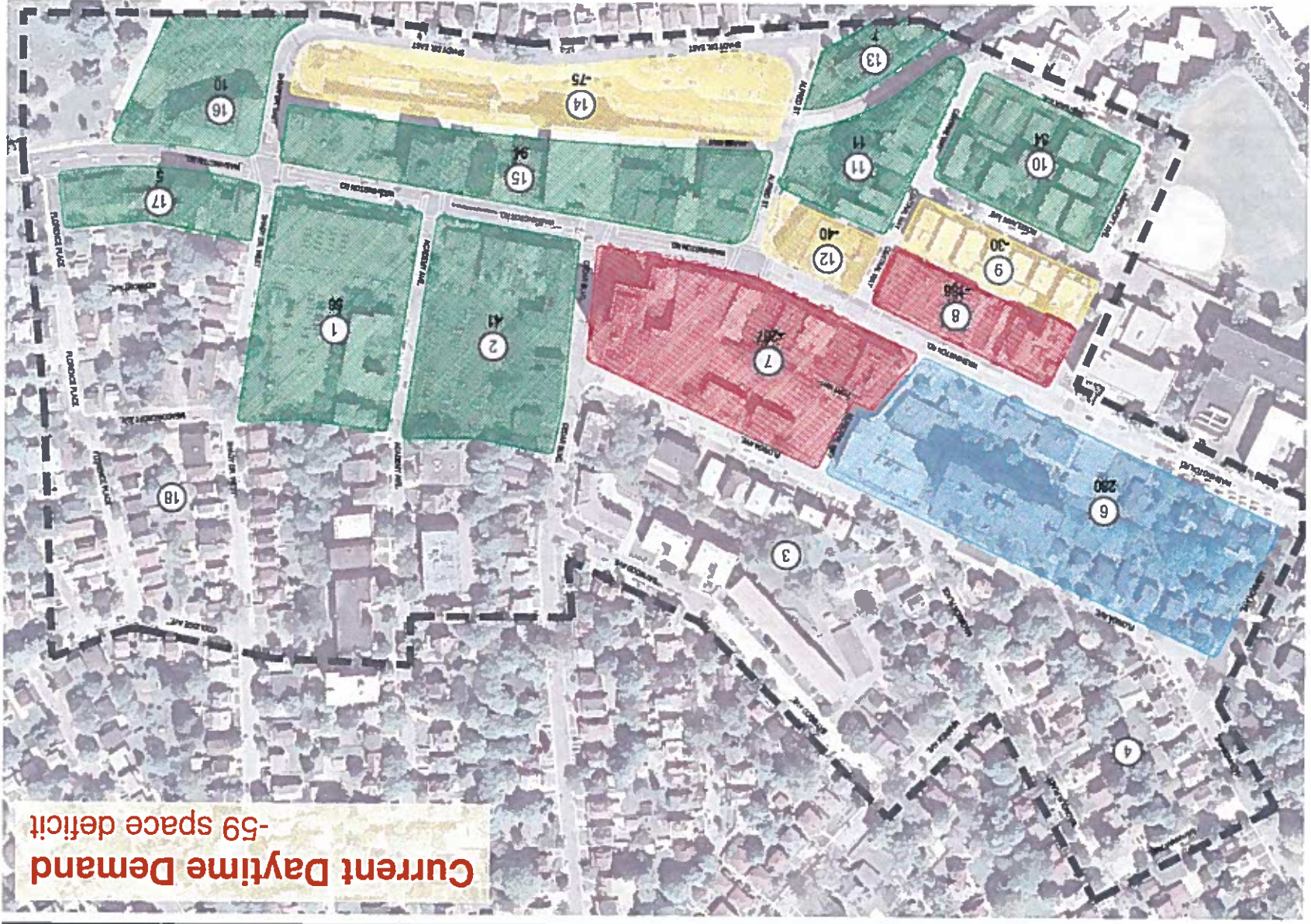
Ratios recommended take into consideration mix of land uses, review of supply, utilization of supply, linked use occurring, linked trips, alternative transportation, etc.

# Parking Demand Analysis

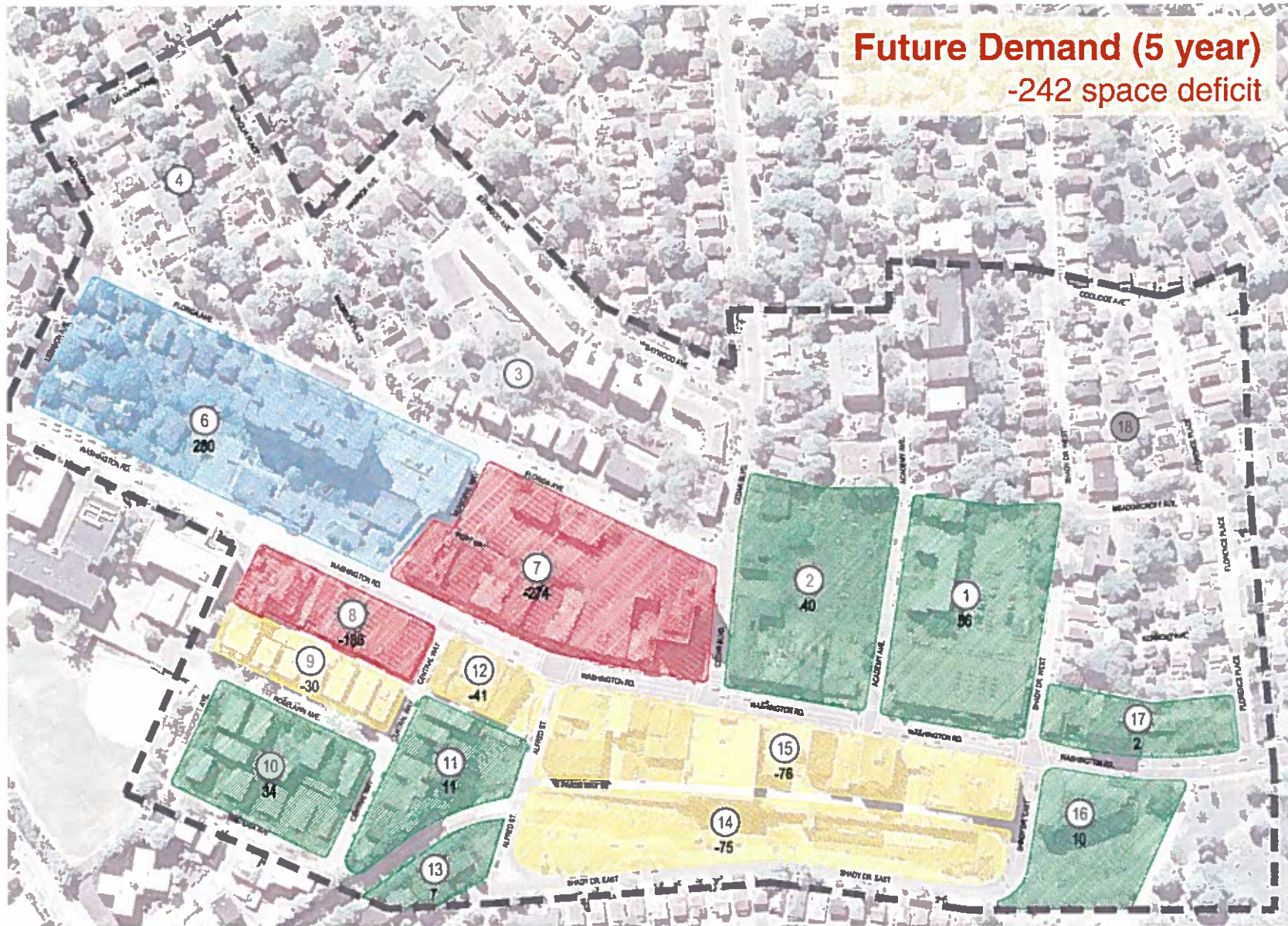
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Block	Office	Medical Office	Retail	Mixed Use	Service	Restaurant	Residential (per unit)	Theatre (per seat)	Government	Hotel (per room)	Commuter (per boarding)	Vacant	Demand Current Day	Demand Current Night	Parking Supply	Current Surplus/Deficit Day	Current Surplus/Deficit Night	Future Surplus/Deficit (5 Yrs)	Future Surplus/Deficit (10 Yrs)
Day	2.56	3.75	2.22	2.35	2.20	5.00	0.75	0.08	2.56	0.68	0.30	2.45							
Night	0.30	0.30	0.30	0.30	0.30	9.00	1.15	0.26	0.30	1.00	0.19	2.45							
1	0	0	30,000	0	0	0	30	0	0	0	0	0	89	44	145	56	102	56	56
2	27,626	1,000	0	0	1,000	7,000	12	0	0	0	0	1,400	121	86	162	41	76	40	39
6	11,900	900	0	23,566	0	0	132	0	0	0	0	0	188	163	468	280	305	280	280
7	3,800	2,000	1,540	128,195	7,800	7,900	55	0	38,600	0	0	7,054	519	189	252	-267	63	-274	-280
8	5,336	9,200	12,168	38,760	0	9,900	0	0	0	0	0	0	216	109	30	-188	-79	-186	-188
9	0	0	0	0	0	0	82	0	0	0	0	0	62	94	32	-30	-62	-30	-30
10	0	0	0	0	0	0	48	0	0	0	0	0	36	55	70	34	15	34	34
11	0	0	1,000	0	0	0	42	0	0	0	0	0	34	49	45	11	-4	11	11
12	0	0	1,000	10,695	2,000	2,900	8	0	0	0	0	900	52	39	12	-40	-27	-41	-42
13	0	0	0	0	0	0	18	0	0	0	0	0	14	21	20	7	-1	7	7
14	0	0	0	0	0	0	0	0	0	0	348	0	104	66	29	-75	-37	-75	-75
15*	5,960	5,960	10,200	88,396	11,250	3,000	0	550	0	108	0	13,965	308	64	402	94	338	-76	-80
16	0	0	0	0	0	0	0	0	21,594	0	0	0	55	6	65	10	59	10	10
17	4,230	3,320	1,500	8,614	0	0	49	0	0	0	0	3,220	84	62	89	5	27	2	-1
<b>TOTALS</b>	<b>58,852</b>	<b>22,380</b>	<b>57,408</b>	<b>298,226</b>	<b>22,050</b>	<b>30,700</b>	<b>476</b>	<b>550</b>	<b>60,194</b>	<b>108</b>	<b>348</b>	<b>26,539</b>	<b>1,880</b>	<b>1,046</b>	<b>1,821</b>	<b>-59</b>	<b>778</b>	<b>-242</b>	<b>-268</b>
													(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)	(stalls)

- Current condition of **-59** space deficit (daytime)
- Future 5 year **-242** space deficit: *40% re-occupancy of vacant space  
Denis Theatre redevelopment  
Hotel development*
- Future 10 year **-268** space deficit: *80% re-occupancy of remaining vacant space*

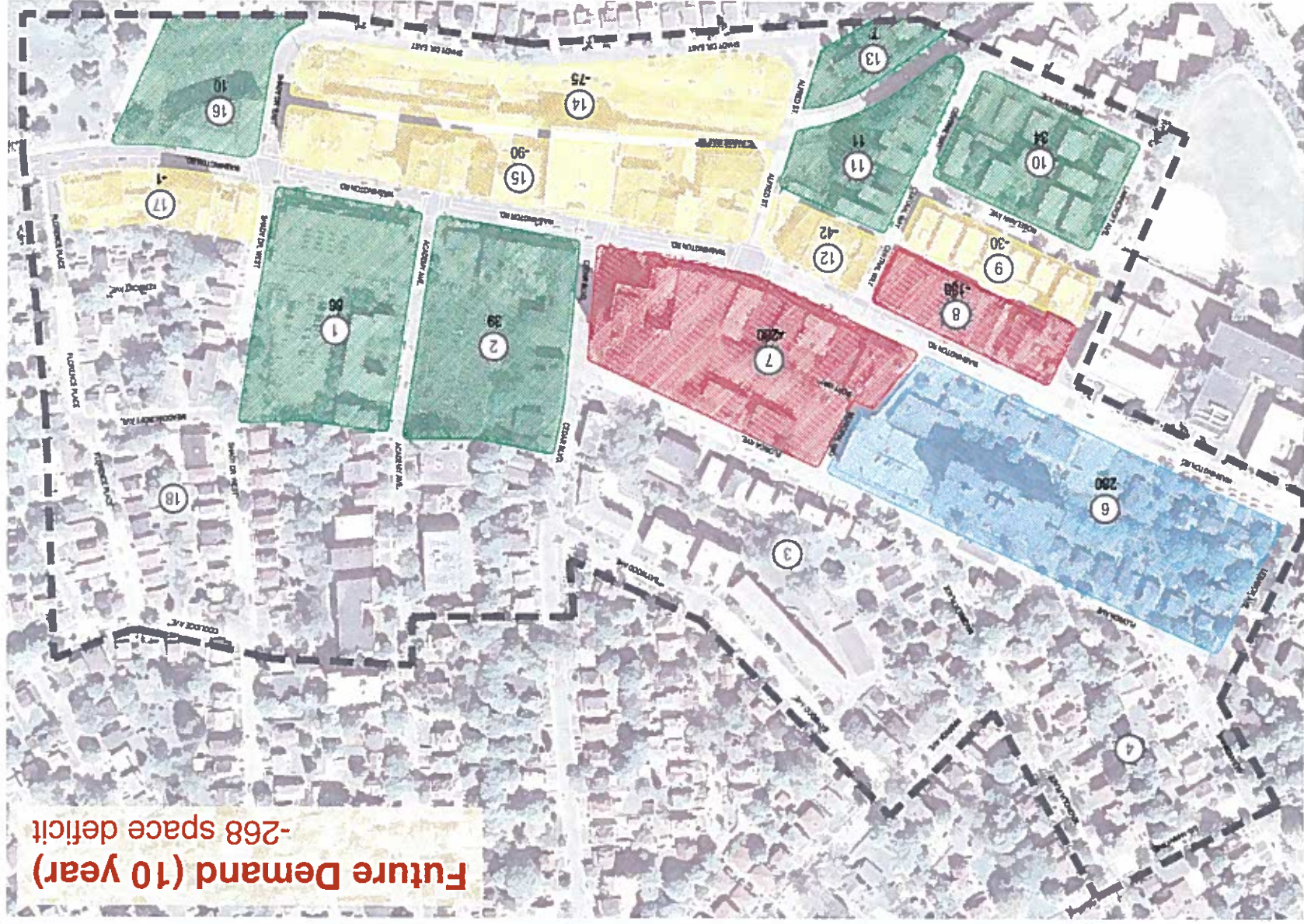
# Parking Demand Analysis



# Parking Demand Analysis



# Parking Demand Analysis





# Recommendations



## Near-Term

- Increase parking enforcement to ensure proper turnover (utilization) particularly at on-street spaces
- Improve parking signage and wayfinding
- Add metered parking along Parse Way
- Promote bicycling as alternative mode of transportation

## Long-Term

- Option 1 - Re-build South Parking Structure sized to meet projected deficit
- Option 2 – Build a parking structure on Academy Lot sized to meet projected deficit

