



# Urban Parking Issues & Studies

Southern California Association of  
Governments  
Toolbox Tuesdays

September 27<sup>th</sup>

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Innovation for better mobility

“ Examine the impacts of parking capacity at eight transit stations in Los Angeles”

# Project Objectives and Issues

- Study of eight TOD locations
  - Identification of the locations
  - Research & best practices study
  - Data collection at each location
    - Number of spaces
    - Fees
    - Time limits
  - Parking occupancy survey
  - Findings and conclusions

## TOD Parking Study Issues/Challenges

- Understanding parking environment around TOD locations
- Relate parking capacity to transit usage
- Understand effects of parking costs
- Understand effects of parking availability
- Conduct adequate number of case studies
- Cover various station “area types”

# TOD station area types



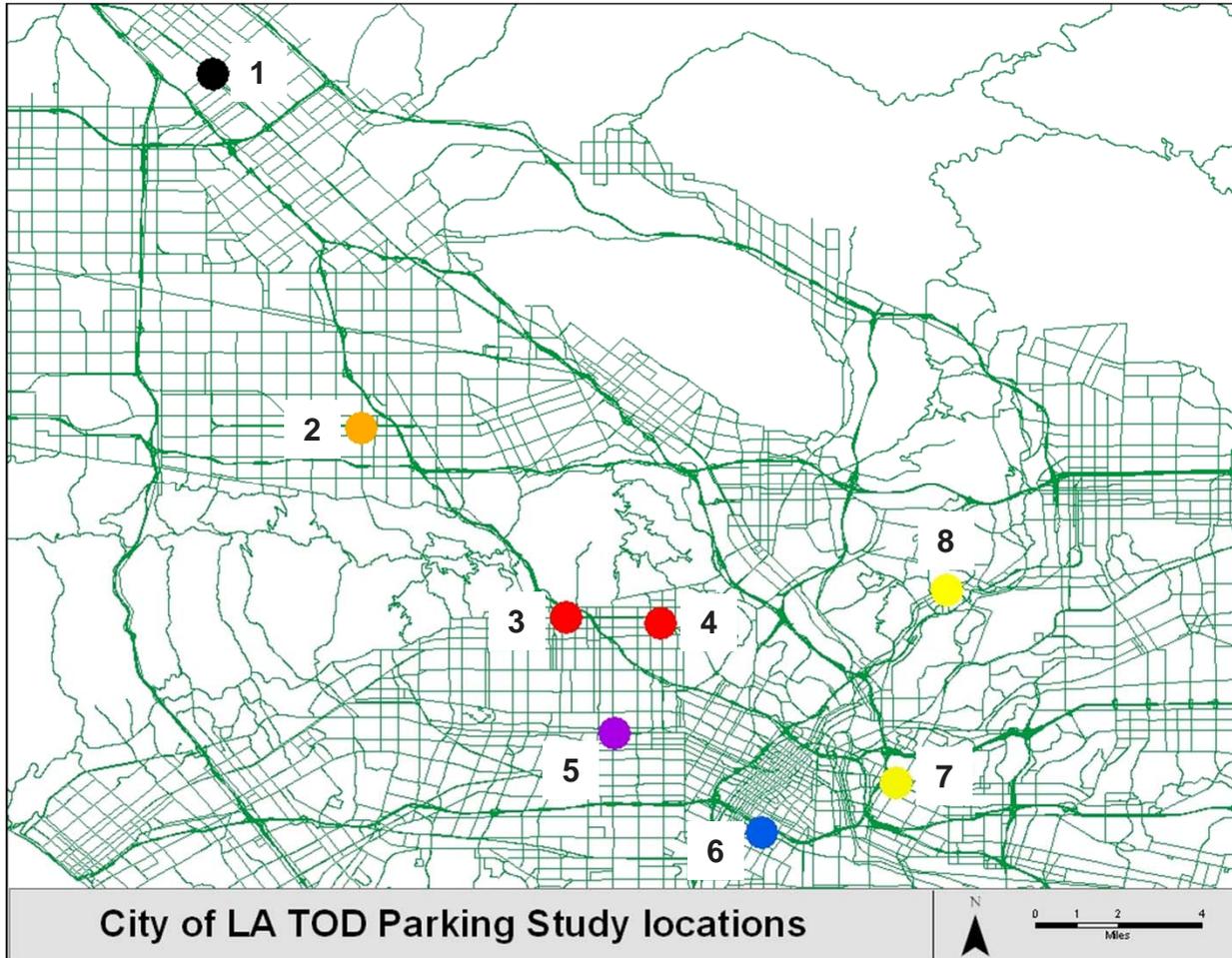
Potential station areas to be studied		
Urban Neighborhood	Urban Center	CBD/Special District
Vermont/Santa Monica (Red)	Hollywood/Vine (Red)	Jefferson (Expo) or Chinatown (Gold)
Transit Neighborhood	Mixed Use Center	Business District
Mariachi Plaza (Gold)	San Pedro (Blue)	Warner Center (Orange)
Suburban Neighborhood	Neighborhood Center	Office/Industrial District
Woodman (Orange) or 103 <sup>rd</sup> Station (Blue)	La Cienega/Jefferson (Expo)	Universal City (Red)



# City of LA TOD Parking Case Studies

- Key tasks
  - Parking inventories ( 1/8<sup>th</sup> mile radius)
    - Public
    - Private
    - Fee structure
  - Utilization surveys
  - Research best practices
  - Existing / future parking generation and demand
  - Assess parking relationship to transit station

# City of LA TOD Study locations

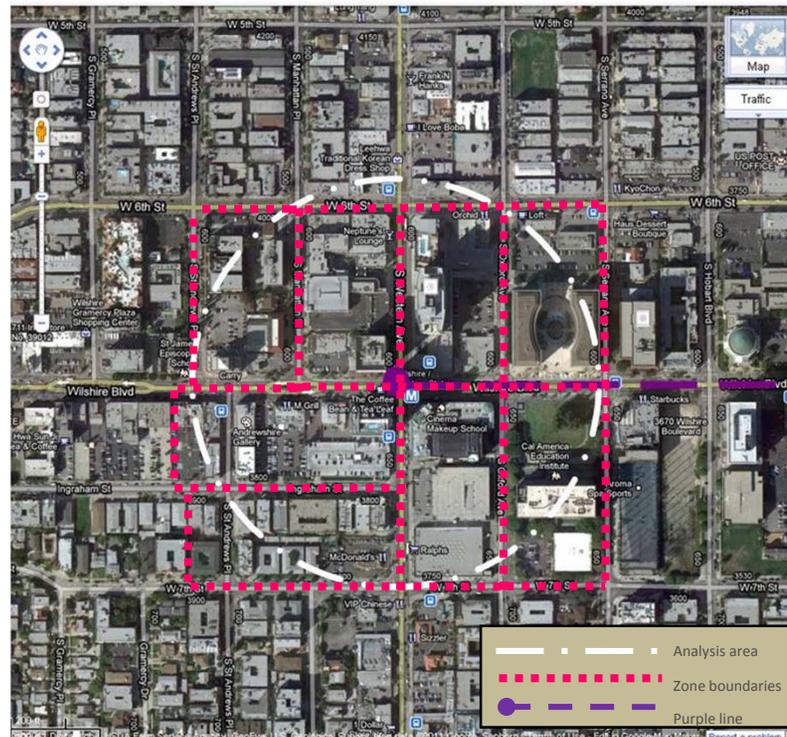


## TOD station names

1. Sylmar
2. Laurel Canyon
3. Hollywood/Vine
4. Vermont Sunset
5. Wilshire/Western
6. San Pedro
7. Soto
8. Highland Park

# TOD Study Area with Analysis Zones

- Map of Wilshire / Western study area with analysis zones



# Data Collection Issues/Challenges



- Inventory
  - Private spaces
  - Garages
  - Residential
- Utilization
  - What time periods?
  - How often?
  - Sample size
  - Access

# Data Collection Issues/Challenges



- Land use
  - Accuracy of data
  - Building size
  - Current land use
- Cost
  - Parking data collection is time consuming!

# Urban Parking Analysis - Methodology

- Existing conditions inventory
- Future projections
  - Land use
  - Growth assumptions
  - Turnover to new uses
  - Block level analysis
  - Mode share
  - Shared use
  - Time of day
  - Weekday v/s Weekend



## Other Research - Best Practices

### Robert Cervero

- Parking policy can influence success of TODs
- Unbundling cost of parking can make TOD more viable
- Walk access and pedestrian environment also critical
- Households near TODs tend to own fewer vehicles
- Do TODs cause people to own fewer cars or are people with fewer cars attracted to TODs?

# Other Research - Best Practices



**Table 1  
Commercial Parking Reductions at Selected TODs**

TOD	Land Use	Parking Reduction
Pacific Court (Long Beach, CA)	Retail	60%
Uptown District (San Diego, CA)	Commercial	12%
Rio Vista West (San Diego, CA)	Retail/Commercial	15%
Pleasant Hill (CA)	Office	34%
Pleasant Hill (CA)	Retail	20%
Dadeland South (Miami, FLA)	Office	38%
City of Arlington (VA)	Office	48%-57%
Lindbergh City Center (Atlanta, GA)	Speculative Office	19%
Lindbergh City Center (Atlanta, GA)	Retail	26%
Portland (OR) Suburbs*	General Office	17%
Portland (OR) Suburbs*	Retail/Commercial	18%

Source: Statewide Transit Oriented Development Study – Parking and TOD: Challenges and Opportunities (Special Report) - Caltrans



## Other Research - Best Practices

### Austin, Texas TOD Guidebook

- Need convenient parking and drop off zones
- “Enough but not too much” parking !
- Locate parking to sides and rear of buildings
- Keep station and buildings oriented to sidewalk and pedestrians, and not parking
- Encourage phased parking – evolve from surface lots to structures
- Provide ample, convenient, secure bike parking

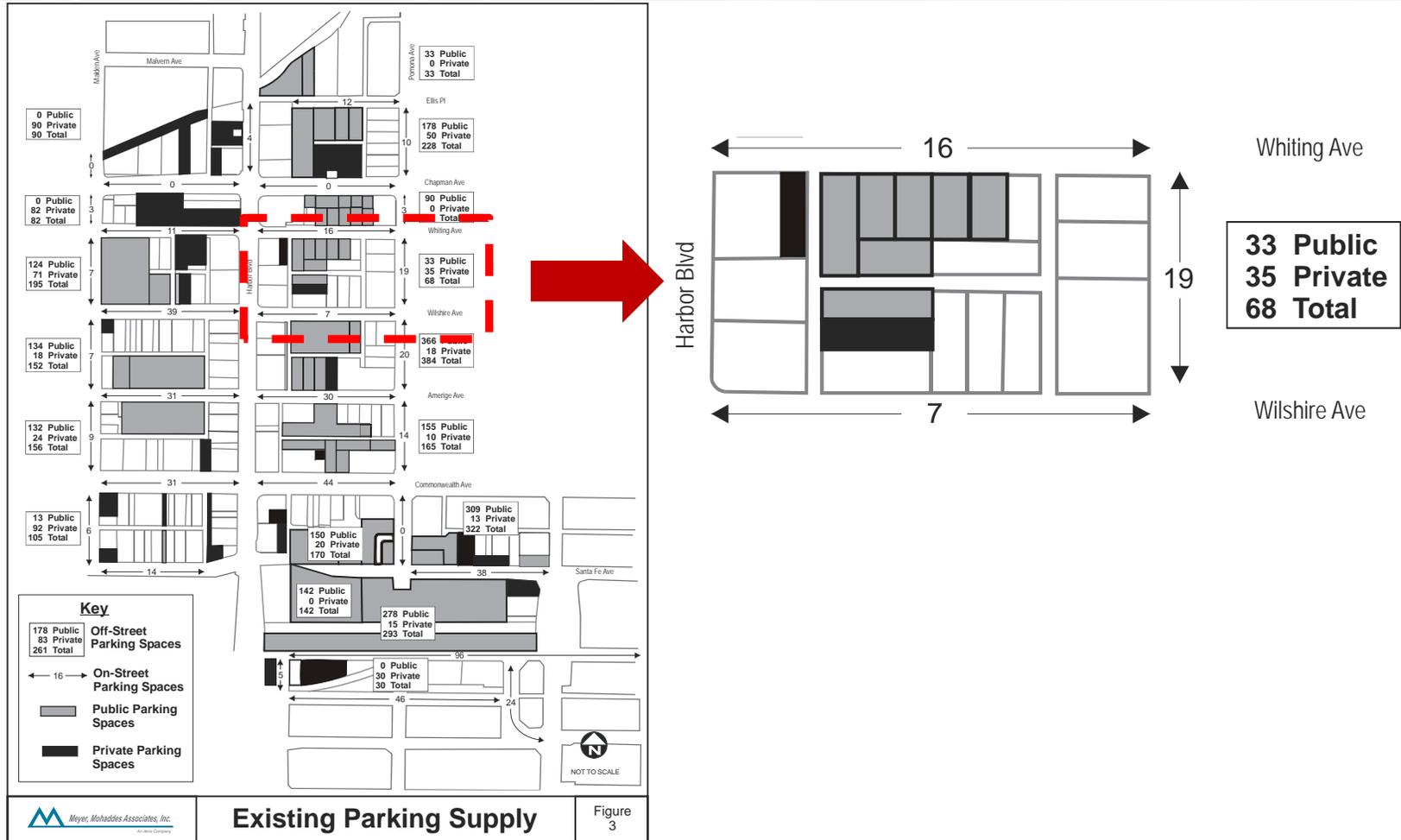


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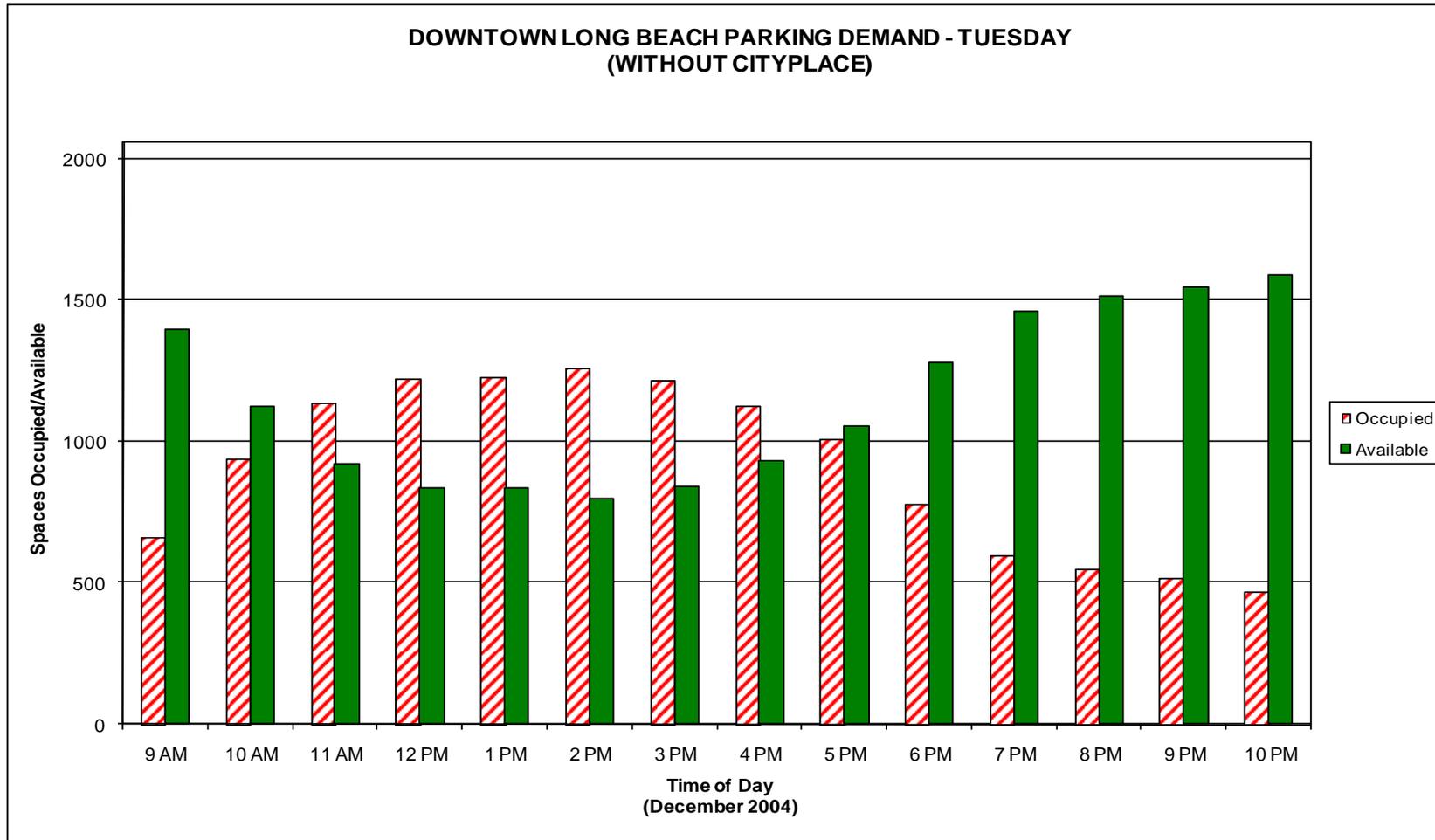


# Parking Methodology Examples

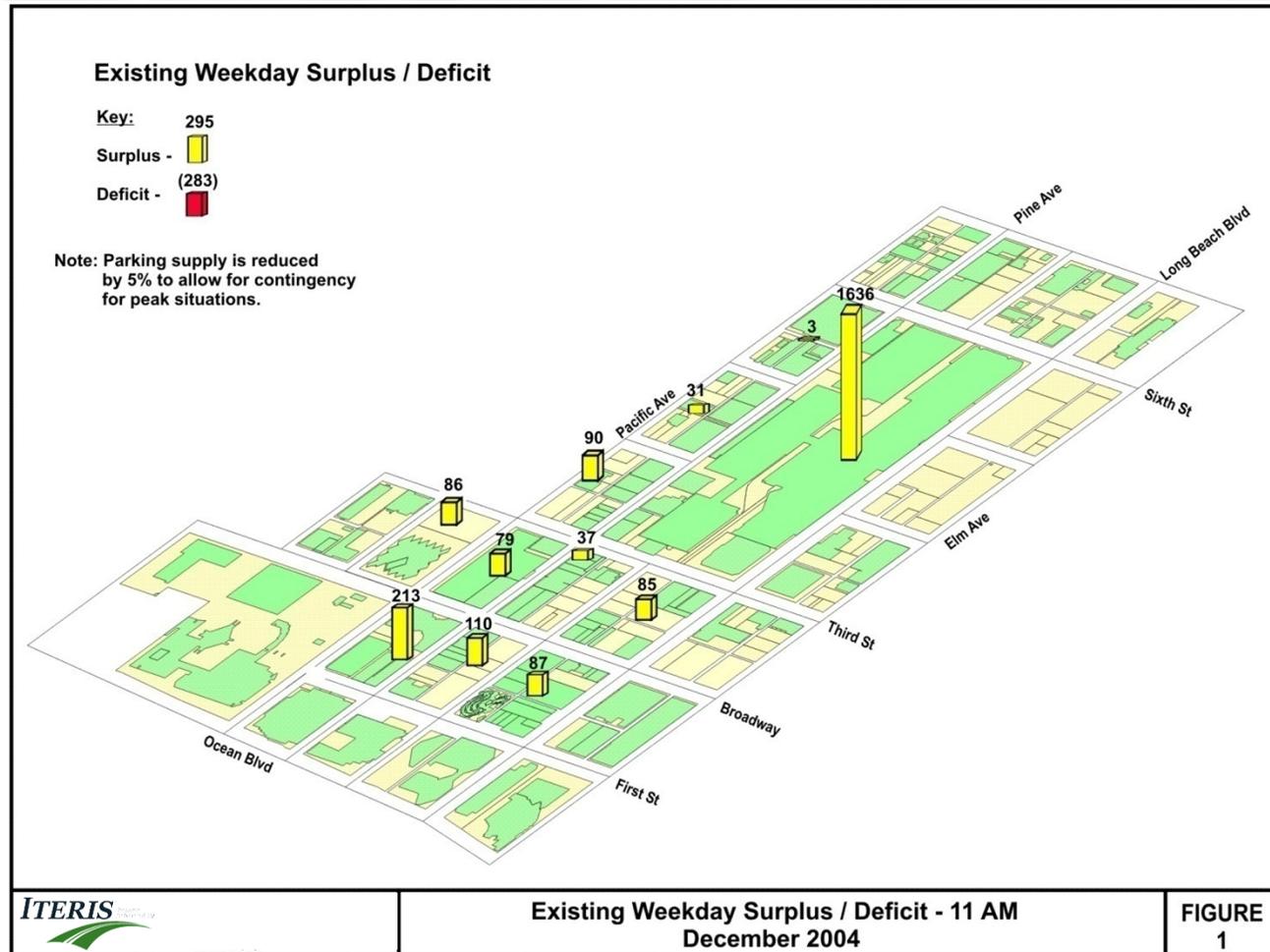
# Detailed Inventory by Block



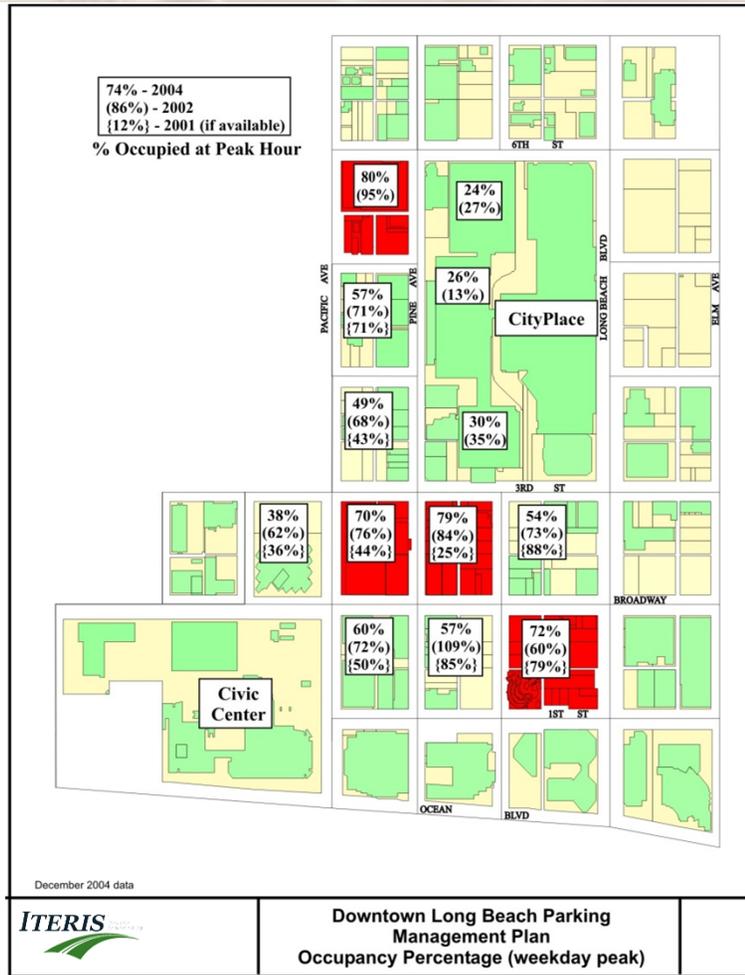
# Hourly Demand



# Surplus / Deficit by Block



# Parking "Impacted" Blocks



# Parking Demand Model

- Block level by land use type

Parking Demand Rate	Residential		Restaurant	
	Ave. 1.5/Unit		10/1000 SF	
	Area	Theoretical Parking Requirement	Area	Theoretical Parking Requirement
	Size		Size	
Block 40	52	78	2380	24
Block 41	6	9	1475	15
Block 42		0	10525	105
Block 43		0		0
Block 54+67		0		0
Block 57	193	290	2083	21
Block 64	61	92	0	0
Block 78	24	36	2323	23
LB Plaza		0	10600	106
Block 81	22	33	1250	13
Block 86	65	98	3510	35
Block 87		0		0
Block 88	142	213	32674	327
Block 89		0	17200	172
Block 90	8	12	2500	25
Block 91		0	1125	11
Block 102		0		0
Block 103		0		0
Block 104		0	15592	156
Block 105		0	7994	80
Block 110		0	4925	49
Block 111		0	2300	23
Block 112		0		0
Block 113		0	2000	20
<b>Totals</b>	573	860	120456	1205

Use local parking code as parking demand rates or other factors

# Parking Demand Model



- Block level with modal adjustments & shared use

Parking Reduction	Residential		Restaurant	
	0% Walk/Bike 0% Transit 0% Shared Use		5% Walk/Bike 5% Transit 10% Shared Use	
Area	Number	Reduced Parking Requirement	Number	Reduced Parking Requirement
Block 40	78	78	24	19
Block 41	9	9	15	12
Block 42	0	0	105	84
Block 43	0	0	0	0
Block 54+67	0	0	0	0
Block 57	290	290	21	17
Block 64	92	92	0	0
Block 78	36	36	23	19
LB Plaza	0	0	106	85
Block 81	33	33	13	10
Block 86	98	98	35	28
Block 87	0	0	0	0
Block 88	213	213	327	261
Block 89	0	0	172	138
Block 90	12	12	25	20
Block 91	0	0	11	9
Block 102	0	0	0	0
Block 103	0	0	0	0
Block 104	0	0	156	125
Block 105	0	0	80	64
Block 110	0	0	49	39
Block 111	0	0	23	18
Block 112	0	0	0	0
Block 113	0	0	20	16
<b>Totals</b>	860	860	1205	964

Able to adjust walk, bike, transit and shared use factors

# Parking Demand Model

- Time of day projections

Block 40 Weekday					
Land Use		Residential		Restaurant	
Spaces Reduced by Mode Split		78		19	
Hour		%	Spaces	%	Spaces
6:00 AM		100	78	0	0
7:00 AM		95	74	2	0
8:00 AM		90	70	5	1
9:00 AM		87	68	10	2
10:00 AM		85	66	20	4
11:00 AM		85	66	30	6
12:00 PM		85	66	50	10
1:00 PM		85	66	70	13
2:00 PM		85	66	60	11
3:00 PM		85	66	60	11
4:00 PM		87	68	50	10
5:00 PM		90	70	70	13
6:00 PM		92	72	90	17
7:00 PM		94	73	100	19
8:00 PM		96	75	100	19
9:00 PM		98	76	100	19
10:00 PM		99	77	90	17
11:00 PM		100	78	70	13
12:00 AM		100	78	50	10

May want to customize hourly factors in place of ULI time of day factors

# Summary



- Parking studies help assess current parking and need for future parking
- Los Angeles TOD Parking project will assess the relationship of parking to transit at TODs/stations
- Significant parking data are required
- Parking data are time consuming to collect
- Data collection issues:
  - Inventory and access to private parking
  - Residential versus commercial parking spaces
  - Time of day to survey
  - Day of week to survey
  - Accurate land use information, by block
- Variations by type of area ( urban, suburban, density, transit service, etc.) need to be addressed
- Causality – does parking and auto ownership drive transit use or the other way around, or both?

Questions?

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