

Mayer Horn, GPI/Greenman-Pedersen, Inc.

Mayer Horn has extensive experience in transportation planning, engineering, operations, project and program management, and communications and marketing. His background includes highways, rail transit, commuter rail, bus systems, ferries, and airport services. His experience has been acquired in both the public and private sectors. He has a Bachelor of Civil Engineering from The Cooper Union, a Master of Science in Civil Engineering with a Major in Transportation Systems from M.I.T., and an M.B.A. in Management for Engineers from Baruch College. He is a licensed Professional Engineer in New York, New Jersey, and Connecticut; a certified Professional Traffic Operations Engineer, and a certified Professional Transportation Planner. He serves as Director of Transportation Planning at Greenman-Pedersen's Babylon office.

Among other positions he has held, he was a manager with the former Tri-State Regional Planning Commission, where he produced the region's transportation plan, and he was responsible for planning and program management for the New York State Department of Transportation in New York City and Long Island where he created the subregional planning process. He also did very detailed planning analyses for the LIRR and began his career at New York City Transit. Finally, he was responsible for the operations of the airport bus company in New York City.

Scott Howell, Long Island Rail Road

Scott Howell is the Director of the Parking & Stations Program for the Railroad.

Scott has 11 years experience at the LIRR. Prior to his career at the LIRR, Scott worked for the Nassau County Planning Dept; New York City Planning Dept., Town of Huntington Planning Dept., and Allee King Rosen & Fleming (AKRF).

Scott is also a long time high school lacrosse official, coach and instructor in Nassau County.

Scott attended East Stroudsburg University in Pennsylvania where he earned a Bachelor of Arts degree in Physical Geography. He also received a Masters of Science degree in Environmental Studies from Shippensburg University of Pennsylvania.

Sarah Lansdale, Suffolk County Planning & Environment

Sarah is the Director of Planning. Prior to joining the County, she was the Executive Director at Sustainable Long Island where she directed ten land use community planning processes in economically distressed communities, resulting in the creation of nine community groups to locally direct revitalization efforts, the adoption of ten land use plans, and the investment of \$500 million in private equity and public funding for mixed-use, transit-oriented development groups. While at Sustainable Long Island, Ms. Lansdale was part of consulting teams for the Huntington Station BOA and Wyandanch BOA. Sarah also has experience at WLIW21 Public Television, fundraising, and oversees as a Peace Corps volunteer. Ms. Lansdale has a Masters Degree of Urban Planning from New York University and an undergraduate degree in Environmental Studies.

Paul Rogalle, L.K. McLean Associates

Paul Rogalle is currently a Senior Transportation Planner with L.K. McLean Associates, after serving over 33 years in municipal engineering, transportation and planning related service, including the Towns of Islip and Smithtown, and finally Brookhaven, where he spent the last 24 years.

Paul has an Associate Degree from Suffolk Community College in civil engineering technology and a Bachelor's with emphasis in Transportation Planning and Management from Dowling College. Paul is currently a member of the American Planning Association and American Institute of Certified Planners, and is a certified Professional Transportation Planner. In addition, he maintains certifications in transportation and traffic signal operations issued through the Transportation Certification Board, which is affiliated with the Institute of Transportation Engineers. Paul has been a member of ITE since 1985.

Paul's professional and active public service continues with his consultant role in Suffolk County assisting with traffic engineering studies; and as an auxiliary police officer for over 20 years.

Elisa Picca, Long Island Rail Road

Elisa Picca is the Chief Planning Officer for the Long Island Rail Road. Elisa has 22 years experience at the LIRR. Prior to her career at the LIRR, Elisa worked for the NYC Office of Management and Budget.

Elisa attended the State University of New York at Stony Brook where earned and Bachelor of Arts degree in Psychology and a Masters of Science degree in Policy Analysis and Public Management. Elisa also holds a Certificate from the Columbia University Business School's Executive Education Program.

Dave Vander Wal, Walker Parking Consultants

Dave Vander Wal is a Professional Engineer and Senior Vice President with Walker Parking Consultants. He has been with the company for over 26 years, and currently heads the design practice for the New York office. Dave has worked on several hundred projects covering all facets of parking consulting and design, including early-stage planning studies, full design and construction administration services, and restoration of older facilities. He specializes in site planning and functional design of garages, helping clients overcome the challenges of constrained and complicated sites. Dave has worked on large-scale mixed-use projects in the United States, Middle East, Asia, India, Central America and Europe. Closer to home, he has recently been working on projects for Molloy College, South Nassau Community Hospital, Good Samaritan Hospital, the MTA in Wyandanch, the Glen Isle mixed-use community in Glen Cove, and the Long Island Lighthouse in Uniondale.

Downtown Economic Development

PARKING SYMPOSIUM

Friday, June 29, 2012 9:00 a.m.- 12:50 p.m. at the
Port Jefferson Village Center
101-A East Broadway
Incorporated Village of Port Jefferson



HOSTED BY:



Special thanks to:



Parking in the Village is metered - \$0.25/half hour
Meters accept coins, *tokens, credit cards and *smart cards. Parking is Free @ Centennial Park, CVS parking lot-3 blocks North & the Brookhaven Marina Parking lot (Brookhaven residents) *See Village Hall

PANEL TOPICS WILL INCLUDE

- **Fixed Parking Ratios**
 - ◇ Are our Standard Multipliers Working?
 - Do we require too much Parking? Is there a better way for Downtowns?
- **Mixed Use Parking Ratio**
 - ◇ Does Shared Parking Work?
 - What about Weekends, Holidays & Special Events? How do we handle Residential & Commercial Overlap?
- **Parking Management**
 - ◇ What are the Costs of Free Parking?
 - How do we handle the problems of a Successful Downtown?

Also covered:

Design options; Structural alternatives, Economic Development and more!

Agenda/Program
Parking Symposium

June 29, 2012

9:00am – 12:50pm

Port Jefferson Village Center

Inc. Village of Port Jefferson, Suffolk County NY

9:00am - 9:30am **Registration**

9:30am **Welcoming Remarks:**

David Calone, Chairman, Suffolk County Planning Commission

Sarah Lansdale, Director of Planning, Suffolk County Department of

Economic Development & Planning

Hon. Margot Garant, Mayor, Inc. Village of Port Jefferson

10:00am - 10:50pm **Panel I - Fixed Parking Ratios**

MODERATOR, Ray DiBiase, PE, PTOE, L.K. McLean Associates

PANELISTS, Frank DeRubeis AICP, Director of Planning - Town of Smithtown
Paul Rogalle, AICP, PTP, Sr. Transportation Planner - L.K. McLean Associates
David Vander Wal, PE, Senior Vice President - Walker Parking Consultants

11:00pm - 11:50pm **Panel II -Mixed Use Parking Ratios**

MODERATOR, Mayer Horn, Director of Transportation Planning, Greenman-Pedersen, Inc.

PANELISTS, Robert M. Eschbacher, PE - Principal, VHB Engineering, Surveying and Landscape Architecture, P.C.

Carolyn Fahey, Intergovernmental Relations Coordinator - Suffolk County

Department of Economic Development & Planning

Bob Coughlan, Principal -TRITEC Real Estate Company

12:00pm - 12:50pm **Panel III - Parking Management**

MODERATOR, Andrew P. Freleng, Chief Planner, Suffolk County Department of Economic Development & Planning

PANELISTS, Hon. Margot Garant, Mayor, Inc. Village of Port Jefferson

Elisa Picca - Long Island Rail Road Chief Planning Officer

Scott Howell - Long Island Rail Road, Director of Parking and Stations Program

BIOS

David L. Calone, Esq., Chairman, Suffolk County Planning Commission

David L. Calone has been a member of the Commission since 2006 and Chair since February 2008. He is the Chief Operating Officer of Jove Partners and Jove Equity Partners, investment management firms which each run a variety of investment vehicles. He serves on the Board of Directors of three privately-held companies. Mr. Calone previously served as a federal prosecutor in the U.S. Department of Justice's Honors Program where he received a 2003 Attorney General's award for his work in fighting terrorism-related and corporate international crime. Mr. Calone also served as a Special Assistant Attorney General in the New York State Attorney General's Office and was an associate at Paul Weiss Rifkind Wharton & Garrison in New York. He has a degree in economics from Princeton University and received a J.D. from Harvard Law School.

Robert J. Coughlan, TRITEC Real Estate Company

Mr. Coughlan is a Principal of TRITEC Real Estate Company and was a co-founder of the Company in 1986 with his brother Jim.

TRITEC has four operating entities; TRITEC Development Group, TRITEC Capital, TRITEC Building Company and TRITEC Asset Management, with offices in Manhattan, Washington D.C., and on Long Island. He has overseen the site selection, acquisition, design, municipal entitlements, financing, joint venture structuring, construction, and leasing/sales of millions square feet of commercial space. Bob has overseen the development of mixed-use complexes, industrial parks, mid-rise office buildings, hotels, medical office buildings, R&D facilities and industrial buildings.

Mr. Coughlan is actively involved with a number of charitable and not-for-profit organizations; including being a board member of the Long Island Housing Partnership, St. Anthony's High School, Tomorrow's Hope, Our Lady of Wisdom Regional School and Montauk We Hope.

Mr. Coughlan earned a B.S. degree in Finance from Northeastern University and attended New York University's Real Estate Institute between 1982 and 1985.

Frank De Rubeis, Town of Smithtown

Frank De Rubeis has been Planning Director for the Town of Smithtown since 1985. He was raised in Ohio, receiving a Bachelor of Arts degree in Political Science from John Carroll University in University Heights, Ohio, and a Master of Arts in Political Science from St. Mary's University in San Antonio, Texas. Frank completed two years of post-graduate studies in Political Science at the New School for Social Research in New York City. Frank also studied photography part-time for seven years at the Parson School of Design in New York City. Prior to becoming Smithtown Planning Director, he was the Town's Community Development Director for four years, Town Planner/Senior Planner for five years, as well as a Planner for the Suffolk County Planning Department and the NY State Department of Transportation. Frank's planning career began after a four-year stint in the U.S. Air Force.

Ray DiBiase, L.K. McLean Associates

Ray DiBiase is Executive Vice President of L.K. McLean Associates in Brookhaven hamlet. He has a Bachelor's Degree in Civil Engineering from Manhattan College, and is a licensed Professional Engineer in NY and NJ, as well as a Professional Traffic Operations Engineer. He has over 35 years of experience in Traffic Engineering and Transportation Planning, primarily as a consultant to municipal clients, ranging from Long Island towns, villages and counties to the NY State Department of Transportation and the Port Authority of NY and NJ. Ray was President of the Institute of Transportation Engineers' Metropolitan Section of NY and NJ in 2010, and continues to serve on its Executive Board. He is also a member of the member of the American Planning Association, and serves on the Planning Board and Comprehensive Plan Committee in the Village of Port Jefferson.

Robert M. Eschbacher, VHB Engineering, Surveying and Landscape Architecture, P.C.,

Robert M. Eschbacher, P.E., is a Principal of VHB Engineering, Surveying and Landscape Architecture, P.C., an 850-person consulting firm with 21 offices along the East coast. He manages the firm's Hauppauge, Long Island office, and has 38 years experience in the management, planning, design and construction inspection of major transportation projects in New York, with a combined construction cost in excess of \$10 billion. He has been qualified to provide testimony as a traffic and parking expert before numerous Town, Village and City zoning and planning boards in New York, as well as in Federal and State Courts.

He has been very active with technical and professional organizations, having served as President of Long Island Transportation Management, Design Professionals Coalition of Long Island, and the local chapters of the American Society of Civil Engineers, National Society of Professional Engineers and the American Council of Engineering Companies. He is also an active member of the Institute of Transportation Engineers, American Planning Association and the American Public Works Association, and he has taught transportation courses at Nassau Community College and Manhattan College.

Mr. Eschbacher received a Bachelor of Civil Engineering degree from Manhattan College and a Master of Science in Civil Engineering degree from Northwestern University. He is a licensed Professional Engineer in New York and New Jersey.

Carolyn E. Fahey, Suffolk County Economic Development

Carolyn has served Suffolk County for over 32 years, the last 19 as the Intergovernmental Relations Coordinator for the Department of Economic Development. Her current responsibilities include development and implementation of business retention and attraction initiatives such as the Suffolk County Foreign Trade Zone and the Industrial/Commercial Incentive Program along with general oversight of Francis S. Gabreski Airport, where Suffolk County is spearheading a 58 acre industrial park. In addition, Carolyn chairs the Suffolk County Downtown Revitalization Citizens Advisory Panel which was created in 1998 to advise the County Executive and the County Legislature on issues key to the viability of our downtowns. The panel consists of twenty members, 18 of which represent the 18 County Legislative districts, representing communities from Montauk to Melville.

Carolyn Fahey has a B.S in Business Administration from Dowling and lives in Cutchogue.

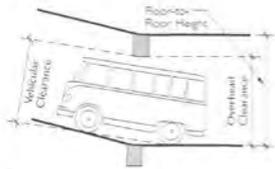


Smithaven Mall November 23, 2007 at 11:26 AM Copyright Long Island Photography (631)728-8112

Assessing Parking Requirements

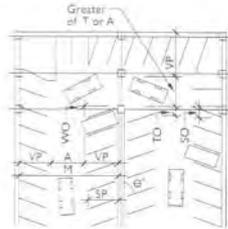






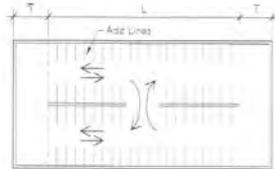
CLEARANCES FOR VEHICLES

Image: Mary Smith



ONE-WAY TURNING BAYS

Image: Mary Smith



Note: If you are using a long bay, consider a short circuit to avoid a long aisle.

SHORT CIRCUIT IN LONG BAY

Image: Mary Smith



NONCONCENTRIC TURNING BAYS

Image: Mary Smith



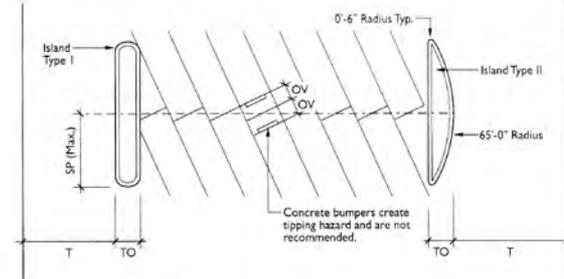
TWO-WAY TURNING BAYS

Image: Mary Smith

Abbreviation	Term
Θ	Angle of Park
A	Parking Aisle
M	Parking Module
SC	Short Circuit
SCO	Small Car Only
SO	Stripe Offset
SP	Stripe Projection
TO	Turning Bay Offset
VP	Vehicle Projection
WO	Wall Offset
WP	Stall Width Projection

KEY TO DRAWINGS

Image: Mary Smith

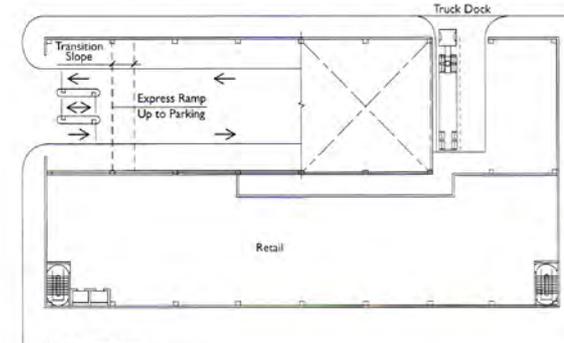


TYPICAL PARKING BAY WITH ISLAND TYPES

Source: Architectural Graphic Standards, 10th edition, 2000.

Key to Drawings

Abbreviation	Term
Θ	Angle of Park
A	Parking Aisle
M	Parking Module
OV	Overlap
R	Radius
SP	Stripe Projection
SW	Wall Offset
T	Turning Bay Offset
VP	Vehicle Projection
WO	Wall Offset
TO	Turning Bay Offset



RETAIL AT GRADE WITH PARKING ABOVE

Source: Mary Smith

Key to Drawings

Top Tier	Isometric
Fourth Tier	Isometric
Third Tier	Isometric
Second Tier + 15' Min.	Isometric
Ground Tier	Isometric

Dimensions and Design

- Actual Use
- Function
- Design and Safety

Parking Determinants

Easy

- Fast Food
- Large Shopping Centers
- Motels (not Hotels)
- Residential Uses

Hard

- Multi-Tenant Structures
- Office (especially under 20,000 sq.ft.)
- Institutions
- Restaurants/Bars

Determining Parking

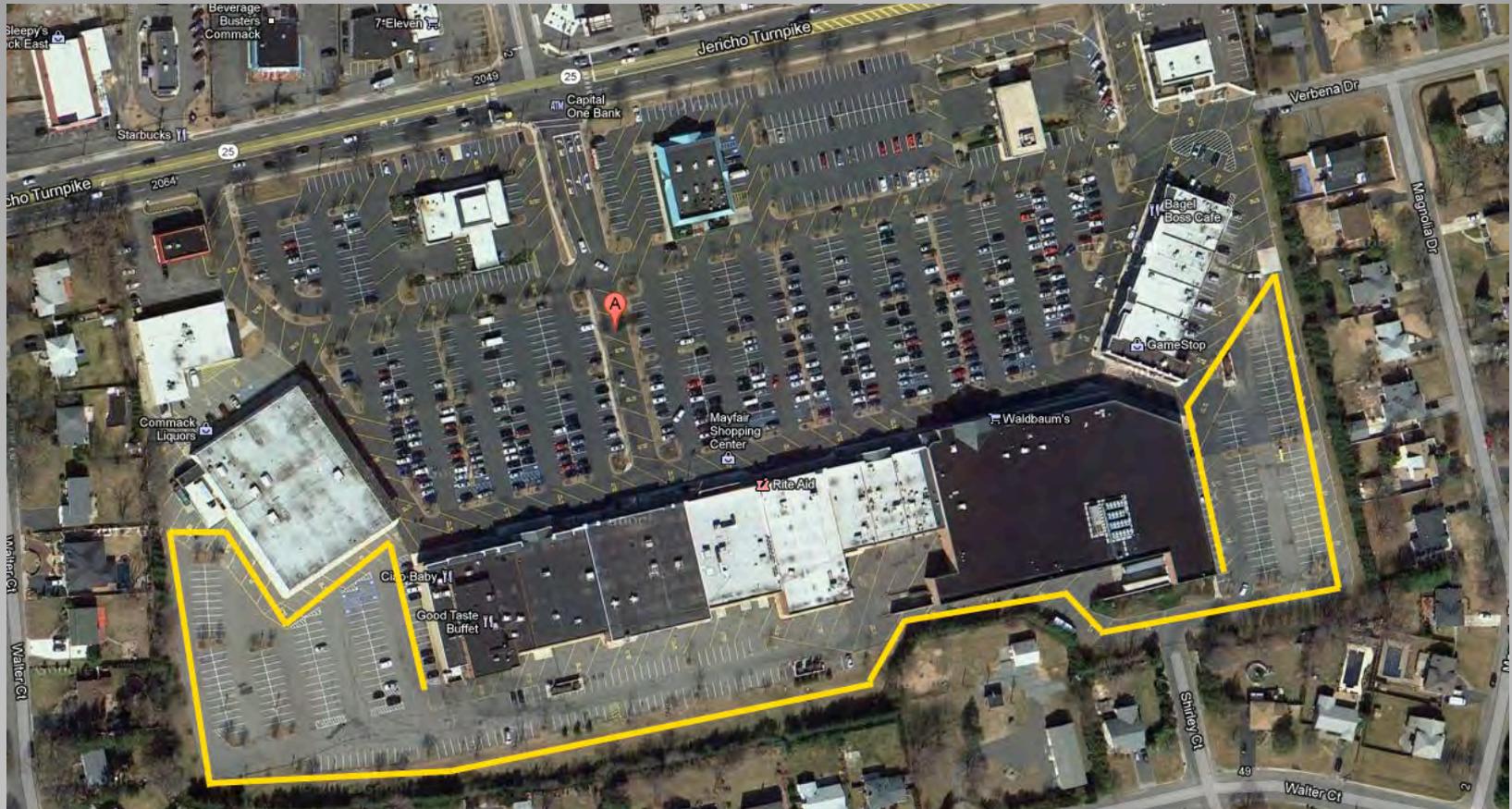


King Kullen, St. James, NY

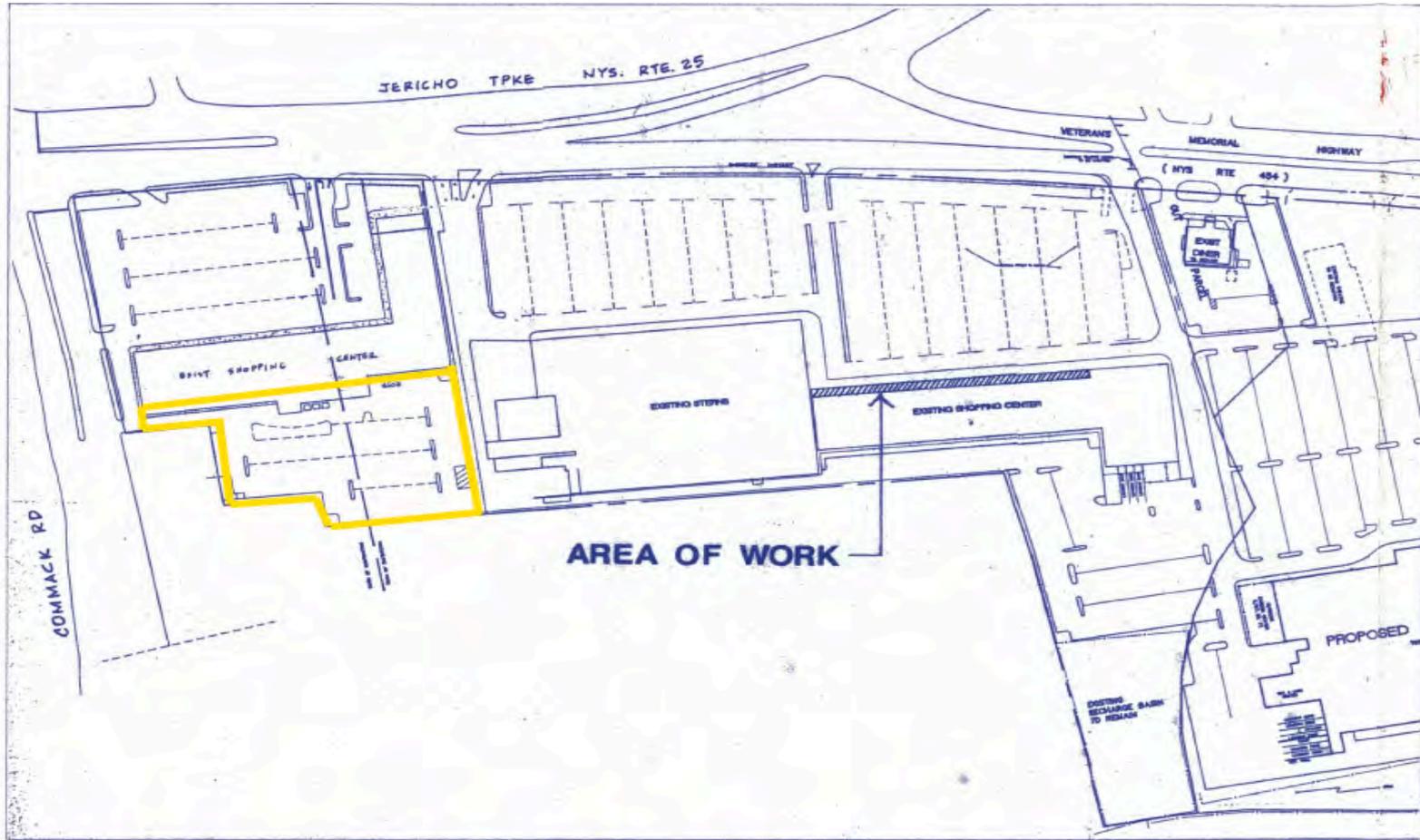


Shop Rite, Commack, NY





Mayfair Shopping Center



BUILDING LOCATION PLAN



Commack Plaza Site Plan



500 Ft

Smith Haven Mall

Smith Haven Mall

Smith Haven Mall

Smith Haven Mall

Jericho Turnpike

Middle Country Rd

25

25

25

25

25

347

112

1695

Burr Ln

Burr Ln

Burr Ln

Burr Ln

Burr Ln

Alexander Ave

Alexander Ave

Jericho Turnpike

Bypass

David's Bridal

RadioShack

Firestone Complete Auto Care

Dick's Sporting Goods

Zan's Kosher Catering

California Pizza Kitchen

Barnes & Noble Booksellers

GameStop

Macy's Smith Haven

Smith Haven Mall Shopping Center

Starbucks

Kay Jewelers

Gap Inc.

GapKids

Bobby's Burger Palace

The Cheesecake Factory

Viviani Ln

Angelo

Riches Rd

New Monticello Rd

1972



2010



Smith Haven Mall



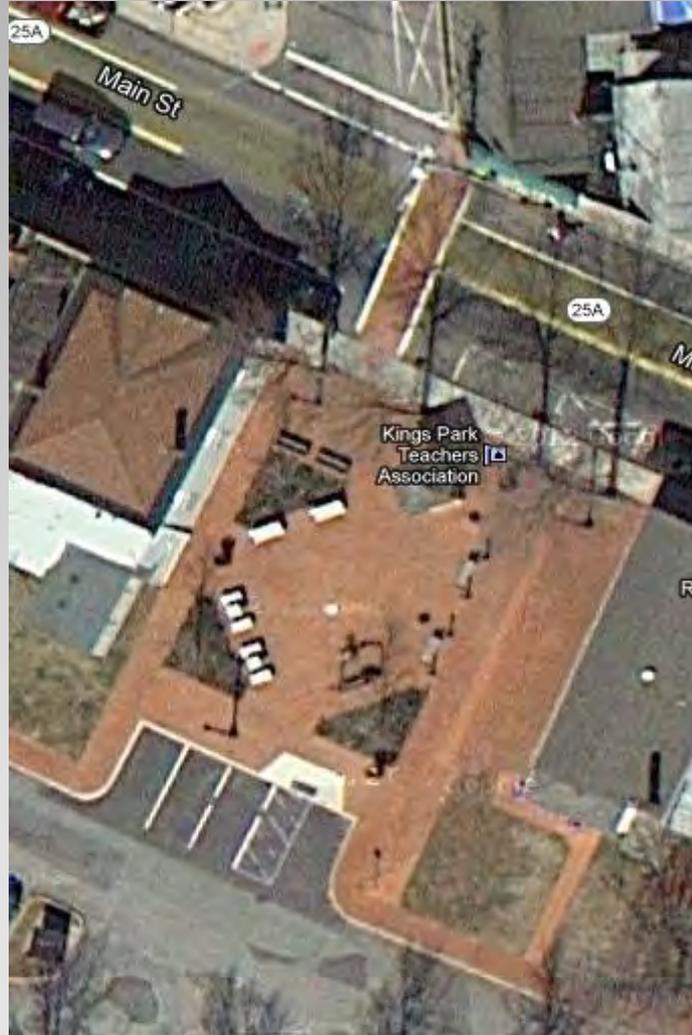
Pedestrian Crosswalks



End of Isle Islands



Alleyway, Downtown Smithtown



Sevet Park, Kings Park

Parking Codes: A Level of Service Approach

Parking Symposium
June 29, 2012



Parking



WALKER
PARKING CONSULTANTS

	Stall Width	Stall Depth	Drive Aisle	
Laurel Hollow	10'	20'	Not specified	
Sag Harbor	9' 10'	20' 18'	24' 24'	9' stalls considered only if 50+ spaces + asphalt/concrete paving.
Southold	9'	19'	22'	
White Plains	8'6" 8'0"	20' 18'	22' 22'	Full ($\geq 25\%$ of total) Standard
Mt. Kisco	9'6" 9'0"	18'6" 18'6"	24' 25'	Short term parking Long term parking
New York City	8'6"	18'	22'	
Stamford	9' 8'6"	18' 18'	20' 20'	Standard "Non Transient"
Boston	8'6"	20'	Not specified	
Philadelphia	8'6"	18'	Not specified	

A Variety of Codes...

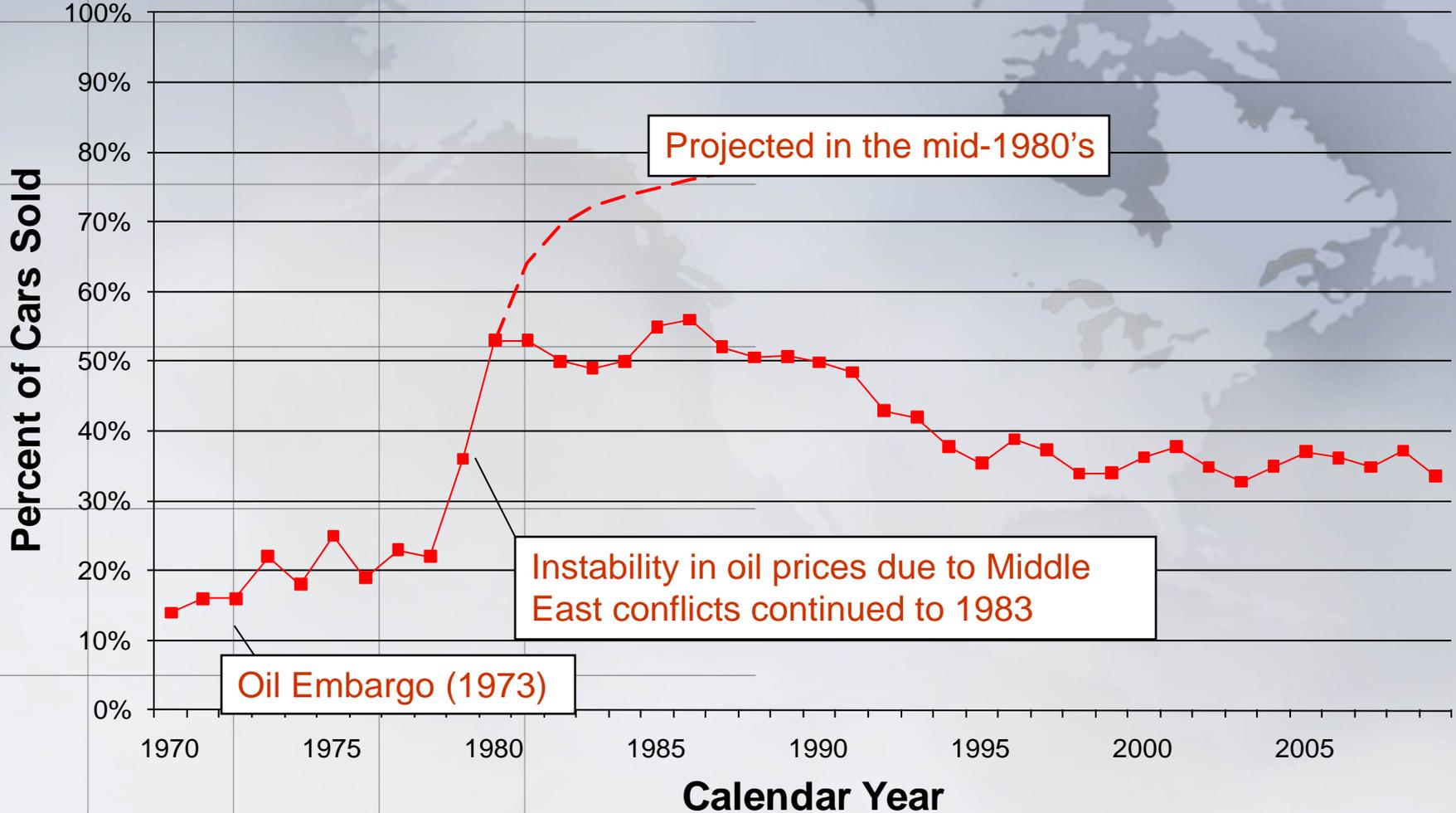


	Compact Stall Dimensions	Allowable %
Laurel Hollow	N/A	
Sag Harbor	N/A	
Southold	N/A	
White Plains	7'6" x 15' 20' drive aisle	Residents and employees only
Mt. Kisco	N/A	Smaller stalls for long term parking
New York City	N/A	
Stamford	7'6" x 16' 20' drive aisle	30%
Boston	N/A	
Philadelphia	8' x 16'	25%

A Variety of Codes...

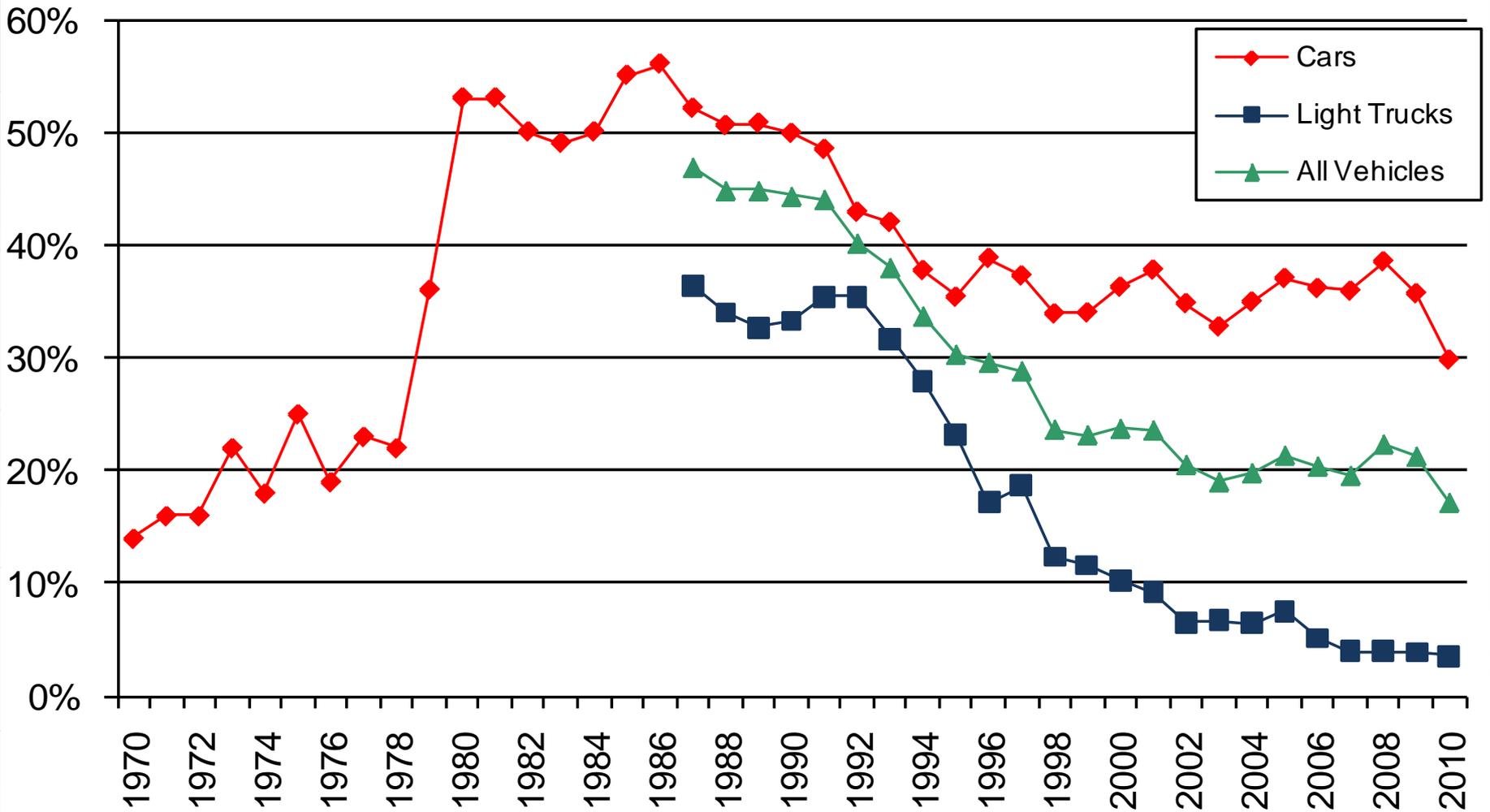


Small Car Sales



Many Codes Are Old, But
Car Sizes Have Changed





Percent of Small Car Sales



A “compact” in 1975 was bigger than an
“intermediate” in 1995



The Problem



- Decline in small cars sales since the 80's when compact stalls got popular.
- Increase in size of compacts.
 - Confusion about what is small car.
 - And people in a rush will ignore it anyway....
 - Too many maneuvers into a narrow stall slows traffic.
- Clustering of market in the middle.
 - Door dings.
 - Biggest problem: loss of stalls to mis-parked vehicles.
- City of Honolulu first to eliminate small car only stalls (new construction) -- went from 60% permitted to 0% permitted! Others have followed.

The Case Against Compact Stalls



Chevy Traverse

6'7" x 17'1"



The Design Vehicle



- Stall width
 - related primarily to door opening needs
 - Vehicle width + 24 to 30” for high turnover
 - Width + 20” minimum for low turnover
- Module: out-to-out dimension of two rows of parked vehicles and the aisle between
 - based on comfort of turn into stall
- Stall width, module and angle are related
 - Wider stall width requires less module for same comfort
 - As angle increases (towards 90), module increases

What Impacts Dimensions?



Keep the stall width as wide as possible for comfort getting into and out of vehicles

Reduce the module to as tight as possible.

The users will appreciate the stall width and barely notice the tight module.

Also, future increases in vehicle sizes are not quite as difficult to deal with.

Best Practice



In part, module and stall dimensions reflect the level of service you need/want to offer.

Low turnover, high familiarity parkers can maneuver a tight garage.

- *Employees, residents, students.*
- *People in big cities are used to a low level of service.*

High turnover, unfamiliar parkers need more space to maneuver.

- *Shoppers, hospital patients, tourists.*

Level of Service



Design Consideration	Chief Factor	Acceptable Level of Service			
		D	C	B	A
Turning radii, ramp slopes, etc.	Freedom to maneuver	Employee.....Visitor			
Travel distance, number of turns, etc.		Visitor.....Employee			
Geometrics	Freedom to maneuver	Employee.....Visitor			
Flow Capacity	v/c ratio	Employee.....Visitor			
Entry/Exits	Average wait	Visitor.....Employee			

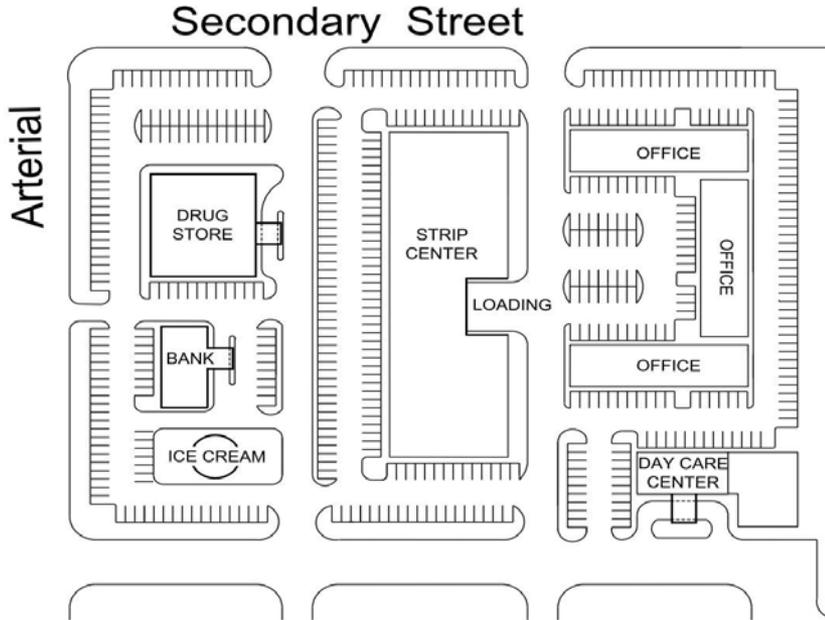
Level of Service



	LOS D	LOS C	LOS B	LOS A
Stall Width	8'3"	8'6"	8'9"	9'0"
Angle of Park				
45	46.50	47.50	48.50	49.50
50	48.25	49.25	50.25	51.25
60	51.00	52.00	53.00	54.00
70	53.50	54.50	55.50	56.50
90	58.50	59.50	60.50	61.50

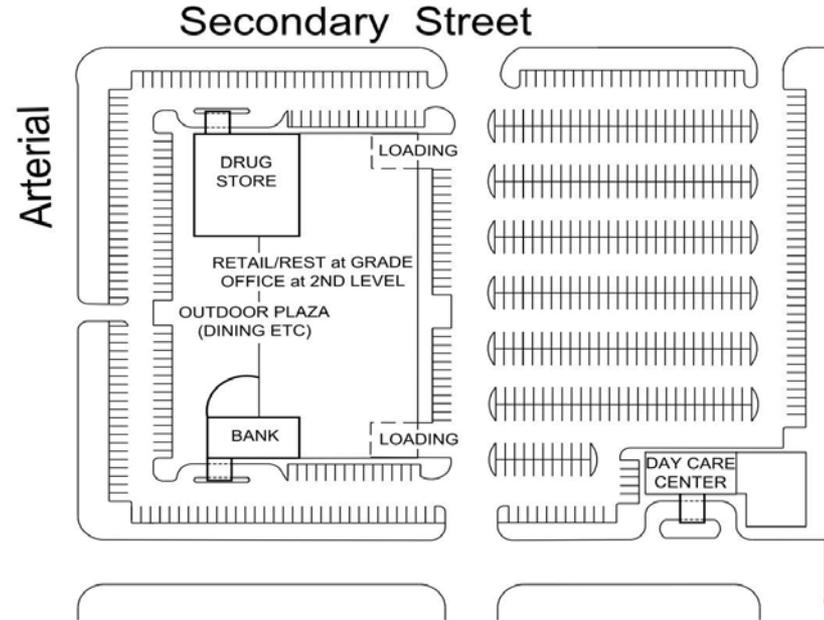
Code Can Be Flexible





As Built

Local Zoning Controls:
 FAR, number of spaces,
 architectural, driveway locations



Better for everybody!

Form based codes,
 Mandatory mixed uses/shared parking
 50% more GLA!

Parking Supply Requirements



Land Use	Weekday		Weekend		Unit
	Visitor	Employee	Visitor	Employee	
Community Shopping Center (<400 ksf)	2.90	0.70	3.20	0.80	/ksf GLA
Super Regional Shopping Center (>600k)	3.20	0.80	3.60	0.90	/ksf GLA
Convenience Retail	4.90	1.20	4.00	1.00	/ksf GLA
Home Improvement Store	2.10	0.50	3.60	0.90	/ksf GLA
Fine/Casual Dining	15.25	2.75	17.00	3.00	/ksf GLA
Fast Food	12.75	2.25	12.00	2.00	/ksf GLA
Nightclubs	15.25	1.25	17.50	1.50	/ksf GLA
Cineplex	0.19	0.01	0.26	0.01	/seat
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat
Arena	0.27	0.03	0.30	0.03	/seat
Health Club	6.60	0.40	5.50	0.25	/ksf GLA
Convention Center	5.50	0.50	5.50	0.50	/ksf GLA
Hotel-Business	1.00	0.25	0.90	0.18	/room
Hotel-Leisure	0.90	0.25	1.00	0.18	/room
Restaurant/Lounge	10.00		10.00		/ksf GLA
Meeting/Banquet (20 to 50 sq ft/ guest room)	30.00		30.00		/ksf GLA
Residential Shared, Rental	0.15	1.5	0.15	1.5	/unit
Residential Shared, Owned	0.15	1.7	0.15	1.7	/unit
Office <25,000sq ft	0.30	3.50	0.03	0.35	/ksf GFA
Office = 100k	0.25	3.15	0.03	0.32	/ksf GFA
Office >500,000 sq ft	0.20	2.60	0.02	0.26	/ksf GFA
Data Processing Centers	0.25	5.75	0.03	0.58	/ksf GFA
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GFA
Bank (Drive In Branch)	3.00	1.60	3.00	1.60	/ksf GFA

Peak Parking Demands



Questions?





Parking Symposium Port Jefferson, New York

June 29, 2012

SHARED PARKING -
MIXED USE DEVELOPMENT

Presented by:
Robert M. Eschbacher, PE
Principal, VHB
Hauppauge, New York



What is Shared Parking?

- Shared parking is the use of a parking space to serve two or more individual land uses without conflict or encroachment.
- The ability to share parking spaces is the result of two conditions:
 - Variations in the accumulation of vehicles by hour, by day, or by season at the individual land uses, and
 - Relationships among the land uses that result in visiting multiple land uses on the same auto trip.

Source: “Shared Parking” by Urban Land Institute



Advantages of Shared Parking

- Reduce land needed for parking lots
- Reduce stormwater runoff/impervious surfaces
- Reduce development costs
- Create opportunities for more compact development
- Encourage walkability
- Provide more space for pedestrian circulation & site amenities



Compatible Land Uses

Land Uses by Time of Peak Parking and Demand		
Weekday	Evening	Weekend
Banks and public services	Auditoriums	Religious institutions
Offices and other employment centers	Bars and dance halls	Parks
Park & Ride facilities	Meeting halls	Shops and malls
Schools, daycare centers and colleges	Restaurants	
Factories and distribution centers	Theaters	
Medical clinics	Hotels	
Professional services		

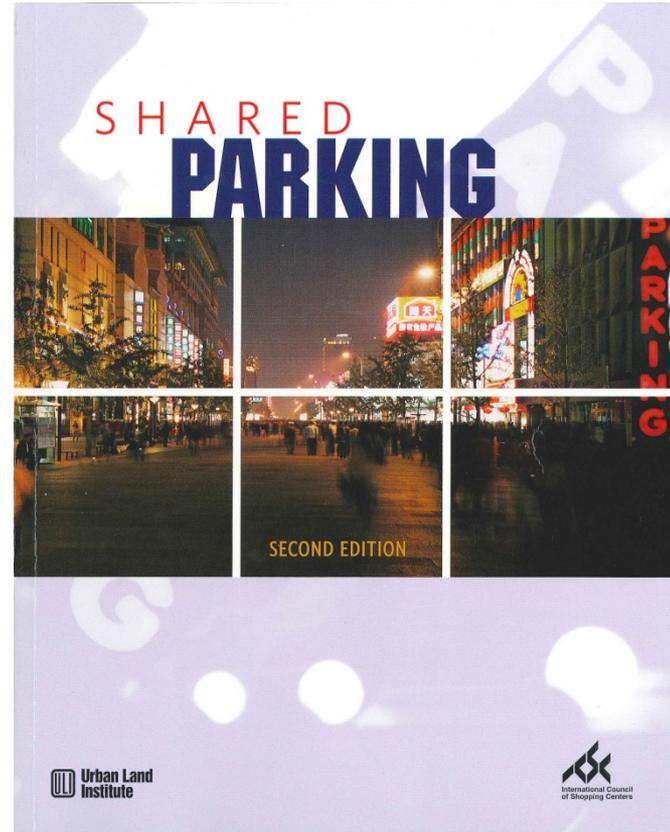


Factors for Consideration

- Physical layout of the development
- Types of users & parking patterns
- Accumulation of parked vehicles for each use during different time periods



ULI Methodology





Time-of-Day Factors



Table 2-5 Recommended Time-of-Day Factors for Weekdays

Land Use	User	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	Noon	1 p.m.	2 p.m.
Shopping Center—Typical	Customer	1%	5%	15%	35%	65%	85%	95%	100%	95%
	Employee	10%	15%	40%	75%	85%	95%	100%	100%	100%
Peak December	Customer	1%	5%	15%	30%	55%	75%	90%	100%	100%
	Employee	10%	15%	40%	75%	85%	95%	100%	100%	100%
Late December	Customer	1%	5%	10%	20%	40%	65%	90%	100%	100%
	Employee	10%	15%	40%	75%	85%	95%	100%	100%	100%
Fine/Casual Dining	Customer	—	—	—	—	15%	40%	75%	75%	65%
	Employee	—	20%	50%	75%	90%	90%	90%	90%	90%
Family Restaurant	Customer	25%	50%	60%	75%	85%	90%	100%	90%	50%
	Employee	50%	75%	90%	90%	100%	100%	100%	100%	100%
Fast Food	Customer	5%	10%	20%	30%	55%	85%	100%	100%	90%
	Employee	15%	20%	30%	40%	75%	100%	100%	100%	95%
Nightclub	Customer	—	—	—	—	—	—	—	—	—
	Employee	—	—	—	5%	5%	5%	10%	10%	10%
Cineplex—Typical	Customer	—	—	—	—	—	20%	45%	55%	—
	Employee	—	—	—	—	—	35%	60%	75%	—
Late December	Customer	—	—	—	—	—	—	50%	60%	60%
	Employee	—	—	—	—	—	—	50%	60%	60%
Performing Arts Theater	Customer	—	—	—	1%	1%	1%	1%	1%	1%
	Employee	—	10%	10%	20%	20%	20%	30%	30%	30%
No matinee	Customer	—	—	—	1%	1%	1%	1%	1%	1%
	Employee	—	10%	10%	20%	20%	30%	30%	30%	30%
Arena	Customer	—	—	—	1%	1%	1%	1%	1%	1%
	Employee	—	10%	10%	20%	20%	30%	30%	30%	30%
No matinee	Customer	—	—	—	1%	1%	1%	1%	1%	1%
	Employee	—	10%	10%	20%	20%	30%	30%	30%	30%
Stadium	Customer	—	—	—	1%	1%	1%	5%	5%	5%
	Employee	—	10%	10%	20%	20%	30%	30%	30%	30%
8 p.m. start	Customer	70%	40%	40%	70%	70%	80%	60%	70%	70%
	Employee	75%	75%	75%	75%	75%	75%	75%	75%	75%
Health Club	Customer	70%	40%	40%	70%	70%	80%	60%	70%	70%
	Employee	75%	75%	75%	75%	75%	75%	75%	75%	75%
Convention Center	Visitor	—	—	50%	100%	100%	100%	100%	100%	100%
	Employee	5%	30%	33%	33%	100%	100%	100%	100%	100%
Hotel—Business	Guest	95%	90%	80%	70%	60%	60%	55%	55%	60%
	Employee	95%	95%	90%	80%	70%	70%	65%	65%	70%
Hotel—Leisure	Guest	95%	95%	90%	80%	70%	70%	65%	65%	70%
	Employee	95%	95%	90%	80%	70%	70%	65%	65%	70%
Restaurant/Lounge	Customer	—	10%	30%	10%	10%	5%	100%	100%	33%
	Employee	—	30%	60%	60%	60%	60%	65%	65%	65%
Conference/Banquet	Customer	—	—	30%	60%	60%	60%	65%	65%	65%
	Employee	—	—	50%	100%	100%	100%	100%	100%	100%
Convention	Customer	—	—	50%	100%	100%	100%	100%	100%	100%
	Employee	5%	30%	90%	90%	100%	100%	100%	100%	100%
Residential	Guest	—	10%	20%	20%	20%	20%	20%	20%	20%
	Employee	100%	100%	100%	100%	100%	100%	100%	100%	100%
Residential	Reserved	100%	100%	100%	100%	100%	100%	100%	100%	100%
	Resident	100%	90%	85%	80%	75%	70%	65%	70%	70%
Office	Visitor	—	1%	20%	60%	100%	45%	15%	45%	100%
	Employee	3%	30%	75%	95%	100%	100%	90%	90%	100%
Medical/Dental Office	Visitor	—	—	90%	90%	100%	100%	30%	90%	100%
	Employee	—	—	60%	100%	100%	100%	100%	100%	100%
Bank	Customer	—	—	50%	90%	100%	50%	50%	50%	70%
	Employee	—	—	60%	100%	100%	100%	100%	100%	100%

3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.	9 p.m.	10 p.m.	11 p.m.	Midnight	Source
90%	90%	95%	95%	95%	80%	50%	30%	10%	—	1
100%	95%	85%	80%	75%	65%	50%	30%	10%	—	1
100%	95%	85%	70%	55%	40%	25%	15%	5%	—	1
100%	100%	95%	95%	95%	90%	75%	40%	15%	—	2
40%	50%	75%	95%	100%	100%	100%	95%	75%	25%	2
75%	75%	100%	100%	100%	100%	100%	100%	85%	35%	2
45%	45%	75%	80%	80%	80%	60%	55%	50%	25%	2
75%	75%	95%	95%	95%	95%	80%	65%	65%	35%	2
60%	55%	60%	85%	80%	50%	30%	20%	10%	5%	3
70%	60%	70%	90%	90%	60%	40%	30%	20%	20%	2
—	—	—	25%	50%	75%	100%	100%	100%	100%	2
10%	20%	45%	70%	100%	100%	100%	100%	100%	100%	2
55%	55%	60%	60%	80%	100%	100%	80%	65%	40%	2.6
80%	80%	80%	70%	80%	100%	100%	85%	70%	55%	2.6
75%	75%	100%	100%	100%	100%	100%	100%	70%	50%	2
1%	1%	1%	1%	25%	100%	100%	—	—	—	2
30%	30%	30%	100%	100%	100%	100%	30%	10%	5%	2
1%	1%	1%	10%	25%	100%	100%	85%	—	—	2
30%	30%	30%	100%	100%	100%	100%	30%	10%	5%	2
5%	5%	5%	10%	50%	100%	100%	85%	25%	—	2
30%	30%	30%	100%	100%	100%	100%	100%	25%	10%	2
70%	80%	90%	100%	90%	80%	70%	35%	10%	—	2.4
75%	75%	100%	100%	75%	50%	20%	20%	20%	—	2.4
100%	100%	100%	50%	30%	30%	10%	—	—	—	2
100%	90%	70%	40%	25%	20%	20%	5%	—	—	2
60%	65%	70%	75%	75%	80%	85%	95%	100%	100%	5
70%	75%	80%	85%	85%	90%	95%	95%	100%	100%	2
10%	10%	30%	55%	60%	70%	67%	60%	40%	30%	5.3
65%	65%	100%	100%	100%	100%	100%	50%	—	—	2
100%	100%	100%	50%	30%	30%	10%	—	—	—	2
100%	90%	70%	40%	20%	20%	20%	20%	10%	5%	2
20%	20%	40%	60%	100%	100%	100%	100%	80%	50%	2
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	2
70%	75%	85%	90%	97%	98%	99%	100%	100%	100%	2
45%	15%	10%	5%	2%	1%	—	—	—	—	2
100%	90%	50%	25%	10%	7%	3%	1%	—	—	3
100%	90%	80%	67%	30%	15%	—	—	—	—	2
100%	100%	100%	67%	30%	15%	—	—	—	—	2
50%	80%	100%	—	—	—	—	—	—	—	3
100%	100%	100%	—	—	—	—	—	—	—	2

Sources:
 1. Confidential data provided by shopping center managers.
 2. Developed by team members.
 3. Parking Generation, 3rd ed. (Washington, D.C.: Institute of Transportation Engineers, 2004).
 4. John W. Dorsett, "Parking Requirements for Health Clubs," *The Parking Professional*, April 2004.
 5. Gerald Salomon, "Hotel Parking: How Much Is Enough?" *Urban Land*, January 1988.
 6. Parking study conducted by Patton Harris Rust & Associates for the Peterson Companies, 2001.



Applicability to Downtown Areas

- Downtown municipal parking IS shared parking
- Shoppers, visitors, tourists & business people park in one space and walk to various destinations



Example: Heartland Town Square

- 9,000 residential units
- 1,000,000 square feet retail development
- 3,400,000 square feet office development



Table 6. Parking Occupancy Rates

Time Period	Component Use						
	Residential	Office	Retail	Hotel	Restaurant	Movie Theatre	Entertainment Facilities
Weekday Rates							
Daytime (8 AM–6 PM)	80%	100%	90%	80%	80%	40%	40%
Evening (6 PM–Midnight)	100%	20%	80%	100%	100%	80%	100%
Nighttime (Midnight–8 AM)	100%	5%	5%	100%	10%	10%	10%
Weekend Rates							
Daytime (8 AM–6 PM)	80%	5%	100%	80%	80%	80%	80%
Evening (6 PM–Midnight)	100%	5%	70%	100%	100%	100%	100%
Nighttime (Midnight–8 AM)	100%	5%	5%	100%	20%	10%	50%



Questions?

Panel II: Mixed Use Parking

Bob Eschbacher, VHB

Carolyn Fahey, Suffolk County

Bob Coughlan, TRITEC

Mayer Horn, GPI, moderator

Thanks

- Suffolk County Planning Commission
 - David Calone, Chairman
 - Andy Freleng, Chief Planner
- Suffolk County Village Officials Association
- Mayor Margot Garant, Village of Port Jefferson

Thanks for the Continental Breakfast

- GPI
- L. K. McLean
- TRITEC
- VHB

Parking in the News: Many Issues

- When demand exceeds supply
- Potential for shuttles: *The Last Mile*
- Pricing: *The High Cost of Free Parking*
- Technology: More and more apps, occupancy detectors, remote control, payment options
- Residency restrictions: Discourages public transport, local business activity
- Reserved spaces: Inefficient use, costly to provide



The High Cost of Free Parking

DONALD SHOUP

Updated by the author

The Last Mile: Increasing Access to Suburban Train Stations in the New York Metropolitan Region through Shuttle Bus Service

Degree Requirement for: The Milano School of International Affairs, Management, and Urban Policy within The New School for Public Engagement

Prepared for: New York Metropolitan Transportation Authority's Transit-Oriented Development Group

Prepared by: Rebecca Bernstein, M.S. Candidate at The Milano School of International Affairs, Management, and Urban Policy within The New School for Public Engagement

Date: May 11, 2012

The purpose of this report is to evaluate the use of shuttle bus services as a means of completing the last mile to and from suburban train stations in the New York (NY) metropolitan region.

This Panel: Focus on Mixed Land Uses

- Distinguish: Mixed land uses with shared parking vs. joint-use park-ride.
- Joint use: Alternative to costly permanent commuter parking
 - DOTs, transit operators: Seeking parking at churches, drive-in movies [if you remember them], regional shopping centers.
 - Perhaps fewer cases of DOTs or transit agencies as lessor (*e.g.*, weekends): raise revenue

Resources

- ITE: Institute of Transportation Engineers
- ULI: Urban Land Institute
- US EPA Smart Growth
- ASCE: American Society of Civil Engineers
- Atlanta
- Portland OR
- Others

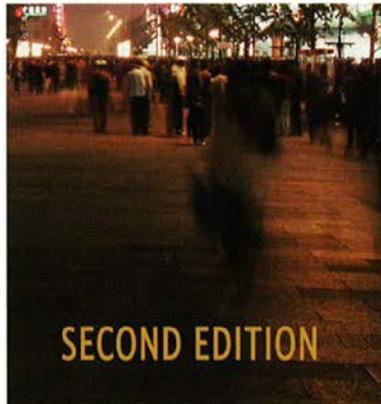
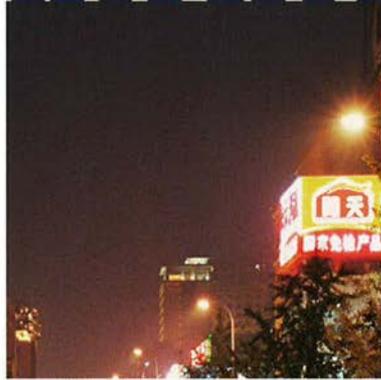
Publications

Parking Generation

ite

International Transport Engineering

SHARED PARKING



SECOND EDITION

U.S. E.P.A. Smart Growth

- Trip Generation Tool for Mixed-Use Developments
- http://www.epa.gov/smartgrowth/mxd_tripgeneration.html

ASCE

- Traffic Generated by Mixed-Use Developments—Six-Region Study Using Consistent Built Environmental Measures

ASCE: Journal of Urban Planning and Development

- Volume 137, Issue 3 (September 2011)
- <http://ascelibrary.org/action/showAbstract?page=248&volume=137&issue=3&journalCode=jupddm&isAuthorized=no>

ASCE (1 of 2)

- Current methods of traffic impact analysis, which rely on rates and adjustments from the Institute of Transportation Engineers, are believed to understate the traffic benefits of mixed-use developments (MXDs), leading to higher exactions and development fees than necessary and discouraging otherwise desirable developments. The purpose of this study is to create new methodology for more accurately predicting the traffic impacts of MXDs. Standard protocols were used to identify and generate data sets for MXDs in six large and diverse metropolitan regions. Data from household travel surveys and geographic information system (GIS) databases were pooled for these MXDs, and travel and built environmental variables were consistently defined across regions.

ASCE (2 of 2)

- Hierarchical modeling was used to estimate models for internal capture of trips within MXDs, walking and transit use on external trips, and trip length for external automobile trips. MXDs with diverse activities on-site are shown to capture a large share of trips internally, reducing their traffic impacts relative to conventional suburban developments. Smaller MXDs in walkable areas with good transit access generate significant shares of walk and transit trips, thus also mitigating traffic impacts. Centrally located MXDs, small and large, generate shorter vehicle trips, which reduces their impacts relative to outlying developments.

COMMUNITY CHOICES
Quality Growth Toolkit

Mixed-Use Development



Atlanta Regional Commission

Quality Growth Toolkit

Mixed-Use Development



Atlanta (1 of 2)

- One of the most successful immediate results of mixed-use development has been the reduced need for on-site parking. Most jurisdictions agree that a 20-25% reduction in required parking is easily achievable, and more savings can be gained with the right mix. DeKalb County is anticipating that the greatest savings will be achieved when residents and office workers can share the same spaces.

Atlanta (2 of 2)

- They have reduced the required office parking by 20%, and lowered residential parking to one space per dwelling unit. The City of Atlanta now uses a computer spreadsheet application to determine parking requirements in mixed-use developments, based upon the combination and amount of different uses.



**Commercial and Mixed-Use
Development**

Code Handbook

Questions Posed in APA Announcement

- Does shared parking work?
- What about weekends, holidays, & special events?
- How do we handle residential & commercial overlap?

Obligations of developers, retailers, hotels, employers, etc. – virtually all land uses

- Yes for parking (even where priced)
- No for transit
- Pricing parking: local culture controls
- What about “cash out” for transit, carpooling, biking, & walking?

How much parking for different combinations of mixed uses?

- How manage this?
- Paid parking *vs.* free?
- Public sector *vs.* private?
- Transit incentives?
- Other incentives to reduce parking demand?

Specific Questions

- To what extent have parking requirements been reduced by shared uses?
- Has the result confirmed the reduced requirements?
- Have you offered transit or other incentives?
- If so, have they had the forecast impact on parking demand?

Additional Questions

- What would developers provide if there were no requirements for off-street parking (and no on-street parking)? What if the market place ruled?
- Wouldn't planners & engineers still have to forecast demand to advise developers what to provide?
- What roles for pricing, transit, van & carpools, car sharing, etc.?

Thank you for your
attention

My Contact Info

- Mayer Horn, P.E., PTOE, PTP
- Director of Transportation Planning
- GPI/Greenman-Pedersen, Inc.
- 325 West Main Street
- Babylon NY 11702
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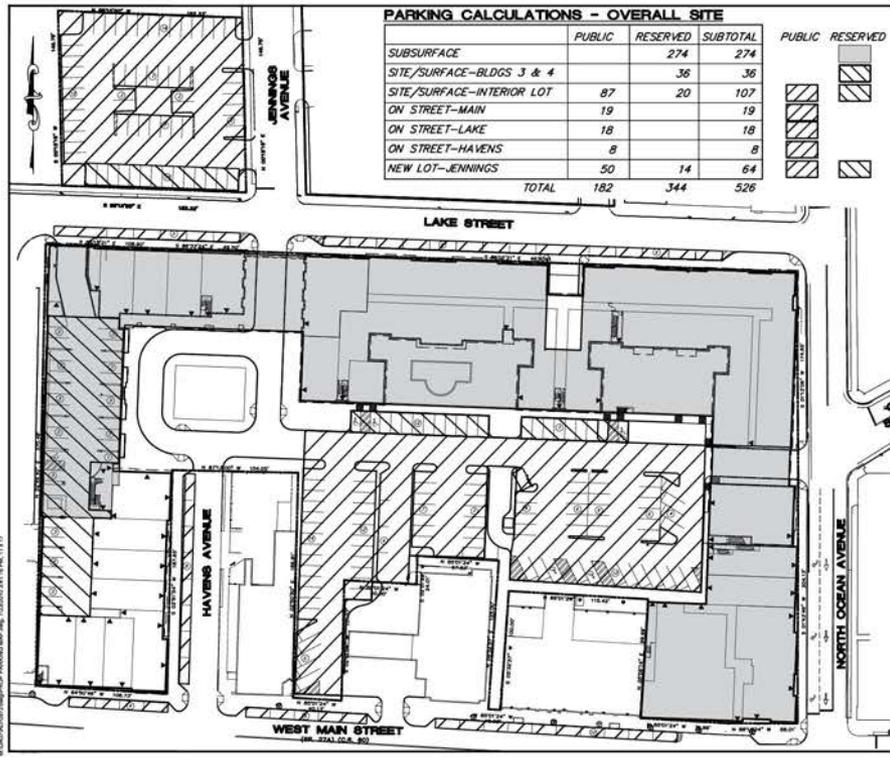
OFFICE - 4 MILLION SQ. FT.

RETAIL - 500,000 SQ. FT.

HOSPITALITY - 570 ROOMS

MULTI-FAMILY - 1,400 UNITS





MULTI-FAMILY - 291 UNITS

RETAIL - 46,000 SQ. FT.

OFFICE - 18,000 SQ. FT.



NEW VILLAGE
@PATCHOGUE



MULTI-FAMILY - 142 UNITS

SUBSURFACES SPACES - 114





PRELIMINARY SITE PLAN



RONKONKOMA HUB

LIRR Parking and Station Access



Downtown Economic Development Parking Symposium

June 29, 2012

LIRR Facts and Figures

- **Over 175 Years of service (Chartered April 24, 1834)**
- **Biggest and Busiest Commuter Railroad in North America and the only one to operate 24/7**
- **124 passenger stations in Nassau and Suffolk County, NY and New York City**
- **11 branches**
- **509 main line track miles**
- **301,000 average weekday passenger trips**
- **Over 6,700 employees**
- **\$2.3 billion Capital Program (2010-14) recently approved**

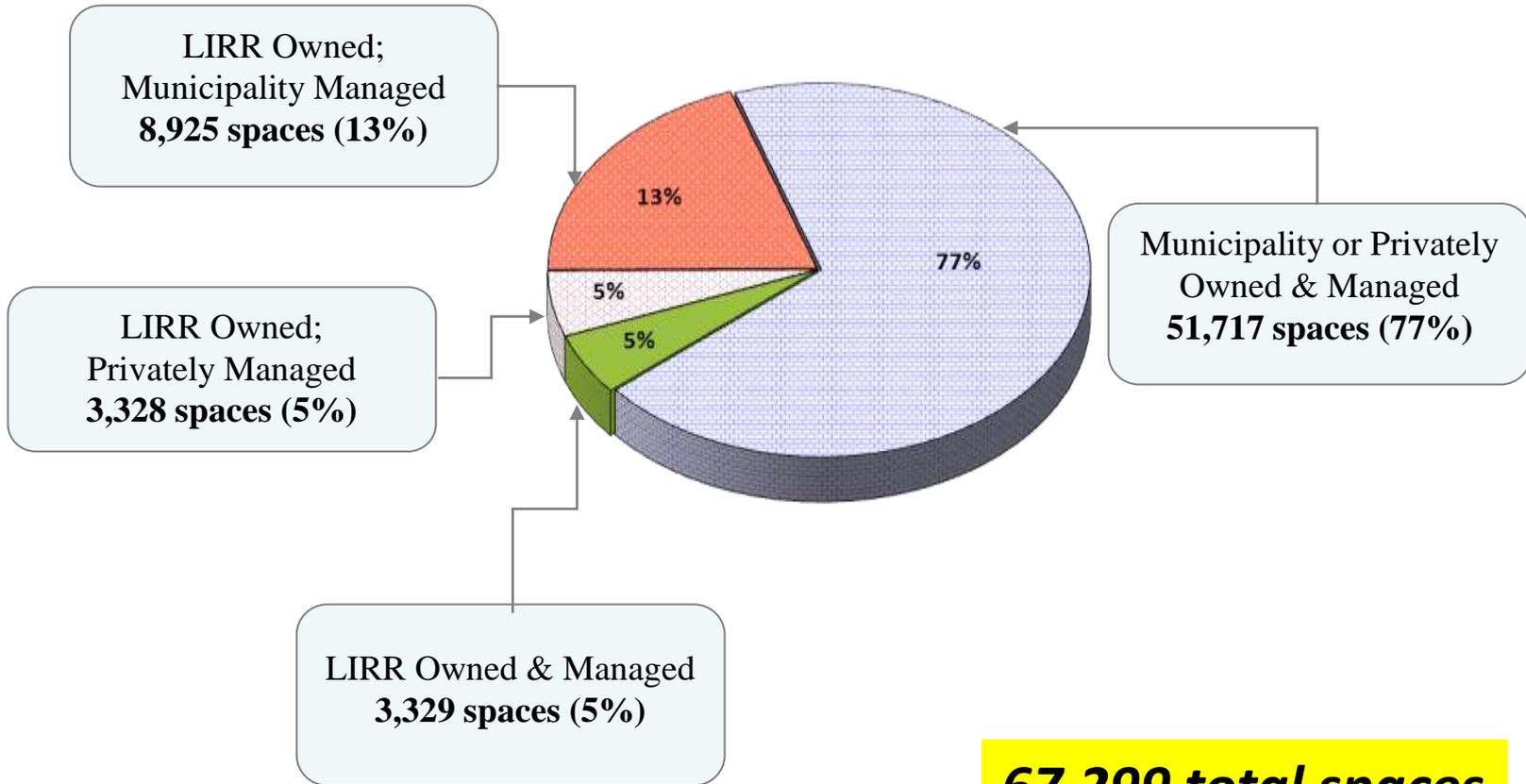
LIRR – Role of Parking

- **Commuter Parking facilities Gateway to LIRR.**
- **Majority of LIRR customers drive to and park their car at a station.**
- **Since the majority of the LIRR's stations are in suburban communities, where only a portion of LIRR riders lives within walking distance of a train station, parking availability is a critical issue.**
- **Even with continued investment in parking, the LIRR continues to experience parking capacity shortfalls at many high volume suburban stations (Main Line – Suffolk County).**
- **LIRR's ESA Project is expected to increase station parking demands.**
- **LIRR works with municipalities to identify opportunities to increase parking at its stations and to explore alternative parking solutions.**

LIRR Parking Inventory

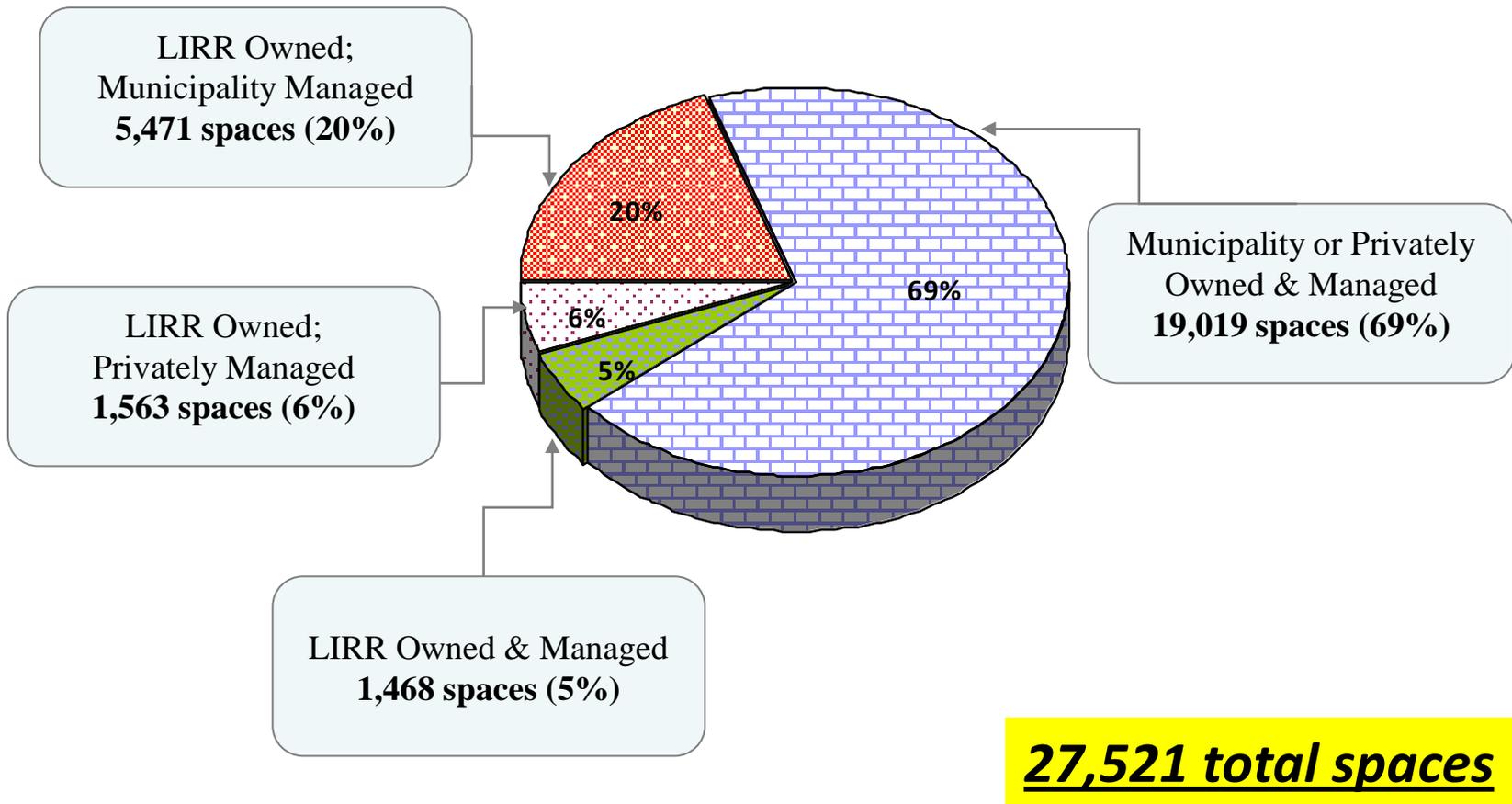
- **LIRR contains 124 commuter stations**
 - **Suffolk County contains 41 stations**
 - **All Stations, other than Pinelawn, contain commuter parking facilities**
- **LIRR contains over 67,000 commuter parking spaces system-wide**
 - **Over 27,000 commuter parking spaces located with in Suffolk County**
- **LIRR owns 23% of all parking spaces, yet manages only 5%**
 - **In Suffolk County, LIRR owns 30% of parking spaces, yet manages only 5%**
- **Municipality or privately owned & managed spaces –77%**
 - **In Suffolk County, Municipalities own 69% of parking spaces.**

LIRR PARKING INVENTORY- SYSTEMWIDE



67,299 total spaces

LIRR PARKING INVENTORY- SUFFOLK COUNTY



Sayville Station



Owner Operator Restrictions Fees

Radius = 1/4 mile

	LIRR	Town	None	None	(Town of Islip)
	Town	Town	None	None	

Lots 116-1, 116-4 and 116-4.1 are subject to Parking Program Agreement until March 31, 2028

LIRR Parking Expansion - Challenges

➤ Real Estate

- Limited land available for horizontal parking expansion due to adjacent station development

➤ Community Opposition

- Vertical parking facilities often receive resistance from suburban communities due to their perceived negative 'urban' impacts (visual impacts, traffic impacts, etc.).

➤ Municipal Coordination

- MTA/LIRR operates approximately 5% of commuter parking spaces at its stations. The remainder is municipally/privately owned.

➤ Financing:

- MTA LIRR must continue to seek funding in future capital programs to invest in parking rehabilitation and expansion projects.

Parking Strategies

1. Address station parking deficits on a branch level basis

- Strategic placement of intermodal facilities along a given branch can increase branch-wide parking capacity and reduce parking demand at other stations along the branch

2. Construct Intermodal/vertical parking structures

- Goal established to install at least 1 new facility per capital program
- \$40M allocated in 2010-2014 Capital Program for intermodal facility development

3. Support Community Parking Expansion Initiatives

4. Support Local Transit Oriented Development (TOD) Efforts

- **Previous investments poised to spur additional TOD**
 - Mineola, Ronkonkoma, Hempstead, Huntington, Long Beach, Bay Shore
- **Current/Future Efforts**
 - Ronkonkoma, Wyandanch, Farmingdale, Republic, W. Hempstead, Hicksville
- **TOD's would reduce demand for parking at LIRR Stations**

Parking Mitigation Strategies - Continued

5. Promote Use of Connecting Transportation Services

- Uniticket programs established with four service providers
 - NYCT, LI Bus, Long Beach Bus, HART
- Bicycle, walking, pick-up/drop-off (kiss-n-ride)
- Connecting services
 - AirTrain, Tanger Shuttle, MacArthur Airport Shuttle, Meadowlands and Citi Field service, Nassau Coliseum, Jones Beach
 - LIRR also promotes Take the Train to Work, College, Hospitals, etc.

6. Other Future Initiatives

- Support communities seeking parking development grants/funds
- Re-direct customers to stations that have excess parking capacity
- Lease land for TOD, charge for parking

Summary

- No Silver Bullet for solving LIRR parking deficits
- Continue to work with the local jurisdictions to identify & implement appropriate mitigation measures
- Continue to invest in vertical parking structures through our Capital Program
- Support activities that promote alternative station access modes (walk, bike, bus)
- Continue to support local TOD initiatives that reduce parking demand at LIRR Stations and promote increased use of public transportation