

Rail~Volution DC 2011

Parking Strategies for Transit Oriented Development and Smart Growth

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Smart Growth and TOD Trends

- “Every Decade between now and 2050, the US will add approximately 30 million people” – *ULI Infrastructure Report 2010*
- Baby Boomer generation (age 44-62) are becoming “empty nesters”, want to trade down, live in an urban or semi-urban setting with access to transit and amenities (Jeffrey Otteau)
- Generation Y (age 14-31), is entering the housing market, more likely to be childless, and prefer a more urban lifestyle with access to transit. (Jeffrey Otteau)
- The next generation of projects will orient to infill, urbanizing suburbs, and transit-oriented development....People will continue to seek greater convenience and want to reduce energy expenses.” – ULI’s *Emerging Trends in Real Estate 2010*



Structured Parking – Critical To TOD and Smart Growth



- Often need replacement parking
- Necessary to achieve density
- A Critical economic factor
- Primary planning / design concern
- Traffic concern

Smart Growth requires smart parking strategies!



Cost of Structured Parking

Spaces

Major land uses

- Retail: 2 to 5 spaces per KSF
- Restaurant: 10 to 15 spaces per KSF
- Office: 2.8 to 4 per spaces KSF
- Residential: 1 to 2 spaces per unit
- More space for cars than humans!

Cost – Residential

- \$15K - \$20K / space
- 500 space facility : \$7.5M - \$9M
- 1.5 spaces per unit: \$24K per unit
- Operating cost - \$35- \$40 / month
- \$200- \$225 rent / month

Commercial - 4/1000 ratio: \$6-8 square foot

Retail - 5/1000 ratio: \$8-10 per square foot



Right Size Parking



- Maximizes development
- Reduces building mass
- Reduces impervious areas
- Reduces energy consumption
- Critical to TOD financial feasibility
 - capital cost
 - On going operational / maintenance costs

TOD's are overparked

- Transit Cooperative Research Program – August 2008
 - TODs best practices still not “legal” at most suburban TOD's
 - Often require painful variances
 - Incorporation of actual TOD parking data critical to next wave of TOD development



Gaslight Commons, South Orange NJ

- 200 Residential units - rental
- 1/2 mile from NJ Transit South Orange Station
- 1.7 space / unit requirement
- 338 spaces
- Actual use: 200-210 spaces
- Unnecessary parking cost - \$500K- \$2 million



Parking Strategies for Smart Growth and TOD

- Apply appropriate parking ratios
- Apply Parking Maximums vs. Minimums
- Share Parking
- Maximize on-street
- Reduce demand - shared car / bike services
- Apply market rate parking fees / Unbundle parking costs
- Use high standard parking design and planning
- Integrate with other uses
- Make it sustainable
- Identify creative partnerships and financing
- Use Technology - convenience
- Manage parking as a system

Appropriate Parking Ratios

Establish flexible parking requirements based on:

- Availability of other modes
- Census data
- Demographics of residential developments (age, income, other auto-ownership factors)
- Parking studies of similar projects
- Unbundled parking fees
- Establish maximums vs. minimums - especially for infill development and adaptive reuse
- Allow phased development to inform future requirements
- TODS own fewer vehicles because they are smaller HH's
- Different incomes have different car ownership rates
Car ownership = \$8 - \$12K per year



Reduce Demand - Shared Car Services



- Reduces demand – replaces need for first or second car
- Reduced parking requirements for new development
 - Van Ness and Turk residential project - San Francisco: Car sharing reduced parking requirement by 50%



Hoboken Corner cars

- 42 special on street parking spots for the shared cars
- City participants receive free membership and use credits

Reduce Demand - Bike Sharing

- Bike sharing programs throughout Europe and have become an integrated part of public transportation
- US Programs – Denver, NYC, Chicago, Minneapolis, Portland, Washington, D.C....
- TOD's have 3.5 times more walking and cycling
- Increasing use of E-bikes
 - Can go up to 20 mph
 - Rechargeable batteries



Capital Bikeshare – Washington, D.C.



E-Bike

Maximize Use of On-Street Parking

- Allow on-street parking to meet development requirements
- Provides convenient, high turnover parking
- Contributes to street level vibrancy - Calms traffic
- Buffers sidewalk activities
- Allow angled parking
- Oklahoma City – 800 spaces added On street

“Each parking space removed from downtown costs adjacent businesses \$10K in sales.”

Nat'l Main Street Center



Shared Parking



- Adjacent, complementary uses share parking and reduce the amount that would be built independently
- Interaction of uses where internal trips can be made without a car
- Improves financial feasibility
 - Maximizes land value
 - Shared capital cost
 - Shared operational costs
 - Increased parking revenue
- Enhanced activity / security
- Commuter parking can be shared!



The Project: Shared-Use Case Study

Development Program

- 750 commuter spaces
- 350 residential units at 1.25 spaces per unit
- 100 room hotel
- 5,000 sf convenience retail
- 8,000 sf dining (fine dining and family)
- 3000 sf bar/club
- 5000 sf health club



The Project – Impact of Shared Use

	Commuter	Mixed-Use Development	Commuter with Mixed-Use
Separate garages, without shared-use	750 spaces	828 spaces peak demand (weekend)	1,578 spaces
Combined garage, with shared-use for commuter and TOD	750 spaces	616 spaces peak demand (weekend)	1197 spaces peak demand (weekend)
			381 spaces
Construction Savings			\$6-8 million
Operational Savings			\$150K - \$175K / year

Bay St. Station, Montclair NJ



Bay Street - Montclair, NJ



Parking Planning and Design

“Parking is part of the mosaic of the city.”

Tom Murphy – Former Mayor of Pittsburgh



Parking Planning and Design

- Miami Bach Parking Deck
- Herzog & de Meuron,
 - designed the Olympic stadium in Beijing (the Bird's Nest).
- Event space rents for \$12,000 to \$15,000 a night.



Use Parking to Create “People Places”

Sculpture Garden



Architectural feature



Public Spaces



Hub of activity



TOD Parking Planning and Design



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Design as a Place

- First and last impression
- Gateway to the community
- People Generator / foot traffic
- Mixed-use integration
- Connect to adjacent land uses

Represent the Quality of the Development

- Architectural elements
- Stair elevator towers
- Vestibules
- Lighting levels / paint
- Landscaping
- High quality graphics / signage

Parking Planning and Design



- Bright – lighting and color
- Smart Management
- Signage, Wayfinding, treatments
- Advertising
- Active
- Glass - security



Sustainable Parking Design



- Efficient Lighting
- Solar arrays
- Bike facilities
- Charging stations
- Preferred parking



Parking Technology

- Parking should be convenient - not free!
- Pay by Cell
- Parking Apps
 - Meter and garage pricing adjust to real time demand
 - Sensors allow drivers to find open parking spaces with their smart phones
 - Reduces congestion and cruising for parking spaces
- Congestion Pricing



Automated / Stacked Parking



Best Applications

- Constrained sites
- Infill development
- Residential / hotel
- High density / urban
- High Land and parking value!



Considerations

- Throughput requirements
- Redundancy needs
- Operating costs

Creative Financing

- Public / Private Partnerships
- TIF financing
- Payment in lieu of parking
- Leverage the parking system
- Public / Public Partnerships –
- True stimulus! - Public Investment in smart parking projects



Urban Transit Hub Tax Credit

- Commercial and residential developers can apply for tax credits for their capital costs if they build in a designated transit hub.
- Receive up to 100% tax credit with a minimum \$50 million investment in a facility located in one of the Urban Transit with at least 250 FTE's.
- Residential projects can receive a 35% tax credit.
- 657 space deck shared by commercial, residential and retail uses



Smart Parking Management

- Manage as a system and asset
- Parking management districts
- Increase effective supply through sharing
- Employ Technology for convenience, maximize use and revenues
- Reinvest revenues to support:
 - economic development,
 - parking demand management
 - New facilities



Cost of Structured Parking – Replacement Parking

Commuter Lot TOD

- 3 acre lot
- 425 spaces

Replacement parking

- 425 spaces @ \$18K / space = \$7.65M
- 240 residential units
- 80 units per acre
- \$32K per unit land cost



Highlands at Morristown NJ



Highlands at Morristown, NJ



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Picture Courtesy of Roseland / Woodmont Properties

Thank You – Questions?



