The Basics of Parking Management
Parking 101

Rick Williams
Rick Williams Consulting
Portland, Oregon

— July 2009 —

Agenda

1. Introductions
2. Ground Rules (5 minutes)
3. Review of Work Scope (10 minutes)
4. Parking 101 (45 minutes)
5. Questions & Answers (15 minutes)
6. Next Meeting
   - Who is not at the table that needs to be here?
   - Schedule of meetings

Ground Rules

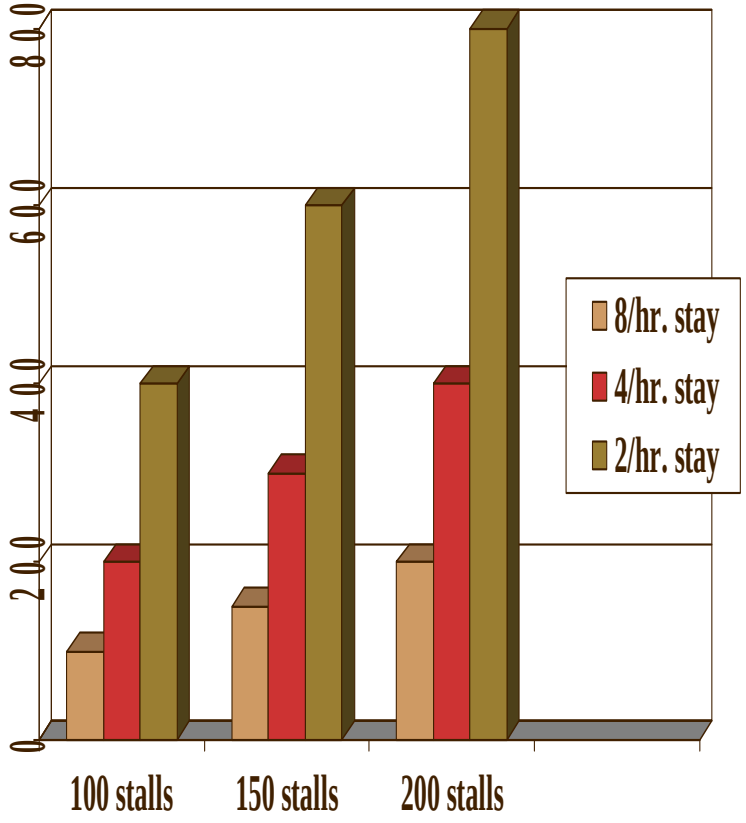
Background

- We want you to use your brains.
- You know more about Springfield than the consultant.

Making it work

- ✓ Support for downtown Springfield.
- ✓ Participation.
- ✓ Open-mindedness. (We will challenge the status quo)
- ✓ Courtesy to others.
- ✓ Liaison and feedback.

Rule of Thumb # 1
Understanding Physical vs. Functional Capacity



- ✓ Physical Capacity = built supply
- ✓ Functional Capacity = managed supply
- ✓ Managing Turnover maximizes access

Rule of Thumb # 2
Use Parking Management Best Practices

- ✓ **Parking and zoning – basic "priority" relationship**
  - Should employees park in residential zones?
  - Where do customers want to park in commercial/mixed use/retail zones?
  - Where should employees park in any zone?
  - What should future parking look like (surface/structures/remote)?
- ✓ **Accurate understanding of existing conditions**
  - Data is better than opinion
  - 85% Rule is simple and objective standard
  - Cost/Value of Parking
- ✓ **Develop Guiding Principles**
  - Create a framework for decision-making
  - Who is parking for (customer/visitor, employees)
  - Who is responsible for providing parking (City?, private sector?)
  - What is the ***value*** of parking to goals and objectives of the downtown or business district?

Rule of Thumb # 3
Use Parking Management Best Practices

- ✓ **Relationship of TDM to Parking**
  - Mode split goals and targets (auto, transit, bike, walk, ride share)
  - Understanding relationship between parking and other modes (i.e., efficiency, ***capacity***, and cost)
- ✓ **Identify Management Strategies**
  - Based on all the above
  - Not before

Parking should be seen as a management tool that supports specific economic uses

Parking and Zoning

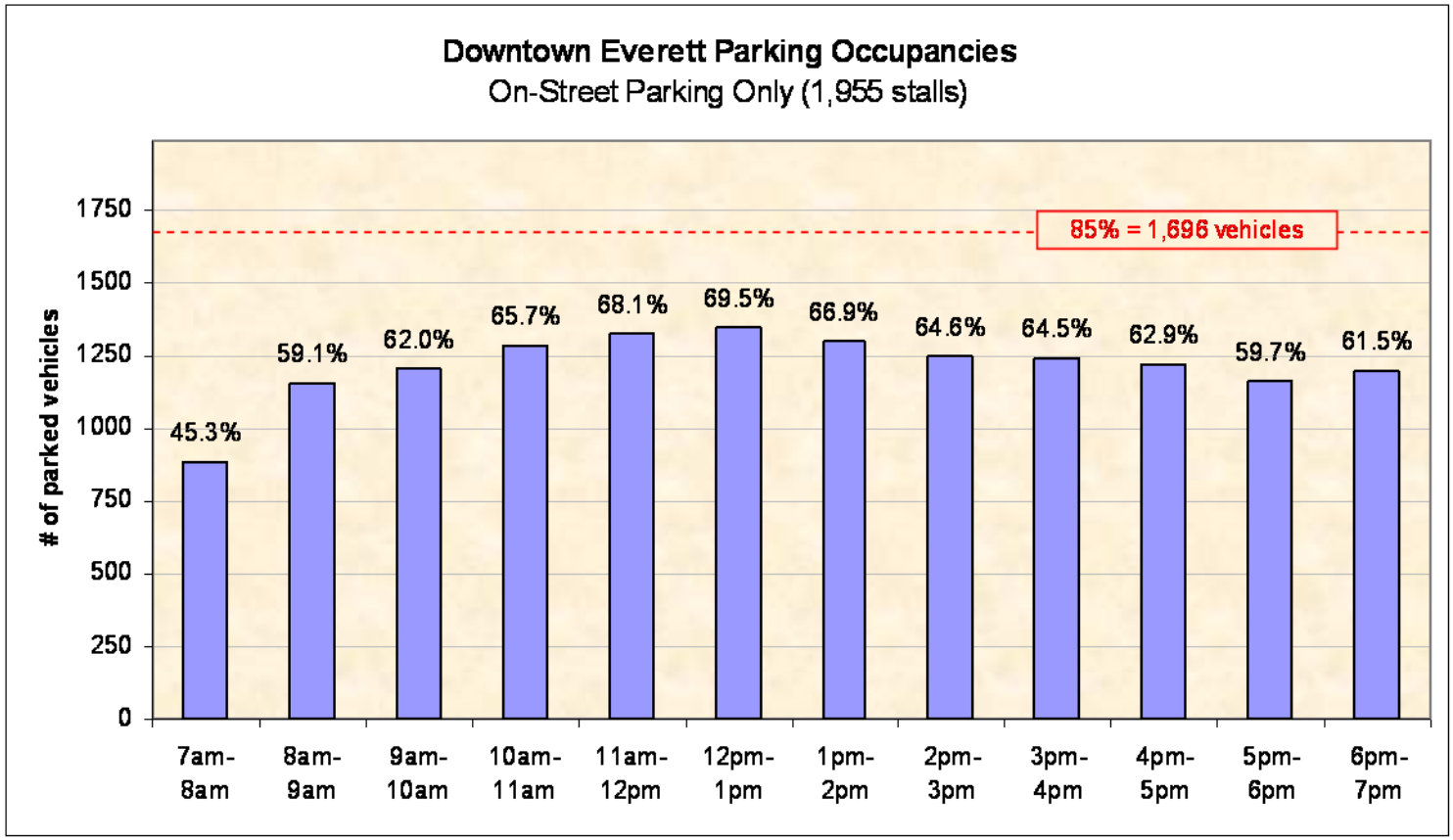
- ✓ Is there agreement that the priorities that zoning establishes for land uses also infers priorities for parking?
- ✓ What does “mixed use” mean for on-street vs. off-street parking downtown?
- ✓ Should employees be allowed to park on-street in commercial or residential zones?
- ✓ Should residents be allowed to park on-street in commercial zones?
- ✓ What is the intended “vision” for a downtown and what role does parking play?

Answers to these questions are fundamental to parking management strategies that are developed for an area

Accurate understanding of existing conditions

- ✓ **Is there a clear and *objective* understanding of the true parking dynamic?**
- ✓ **Describe the problem with data**
  - **Total supply/inventory**
    - → **On and off-street**
  - **Peak hour occupancy/utilization**
    - → **How many cars are parked at peak hour of the day?**
  - **Turnover**
    - → **How long are cars parked in a specific area on a typical day?**
- ✓ **Unique needs**
  - → **Are there land uses or unique characteristics of a district that would require special consideration in parking management?**
  - → **What are the constraints?**

Everett, WA Case Study



- 1,955 on-street stalls / 6,629 unique vehicles / 603 empty stalls at peak.
- 27% of total vehicle hours are spent in violation of posted time stay.

✓ **815 cars a day parking on-street for four (4) or more hours.**

Guiding Principles

- ✓ A set of standards that guides decision-making for parking management both near-term and long-term.
- ✓ Established to describe the primary purposes for parking in the defined parking districts.
- ✓ Best done through consensus based process with affected stakeholders

Salem Downtown Parking

GUIDING PRINCIPLES - SAMPLE

ACCESS	**Make the downtown accessible to all users through multiple modes.**
PRIORITY PARKING	Make the downtown core conveniently accessible for **the priority user of the public parking system – the customer** of downtown.
	Recognize that on-street parking is a finite resource and needs to be managed to assure maximum access for patrons.
	Provide adequate parking. **Do not overbuild**.
	Provide adequate employee parking while aggressively encouraging other modes.
UNDERSTANDABILITY	Make downtown parking user-friendly – easy to access, easy to understand.
QUALITY	Provide a "parking product" in the downtown that is of the highest quality, to create a positive customer experience with parking and the downtown.
COORDINATION	**Manage the public parking supply using the 85% Rule to inform and guide decision-making.**
	Centralize management of the public parking supply.
	Dedicate downtown parking revenues for downtown operations and ensure downtown parking solutions are financially sustainable.

Strategy Development

On-street Parking

- ✓ Understand that it drives the parking system and *is a finite supply.*
- ✓ First point of access for “priority” users
- ✓ Provides first measure of vitality - turnover
- ✓ Develop and adopt decision-making “triggers”
- ✓ Questions of rate, enforcement, capacity, deficit/surplus should all be trigger based and correlated with Guiding Principles

Turnover – Measure of Vitality

City	Number of On-Street Stalls	Rate of Turnover
Beaverton, OR	990	4.20
Bend, OR	720	7.60
Everett, WA	1,955	5.12
Hillsboro, OR	924	4.90
Hood River, OR	582	6.06
Kirkland, WA	329	8.60
Milwaukie, OR	370	6.00
Oregon City, OR	392	4.70
Redmond, WA	731	3.23
Salem, OR	1,260	7.52
Spokane, WA	1,965	6.36
Vancouver, WA	654 (core)	5.68

- **5.0 is a minimum turnover standard over a 10 hour day**

Strategy Development

Yes

No

Off-street Parking

- ✓ Provides opportunity to consolidate access
- ✓ Should be coordinated with on-street system (first four hours)
- ✓ Access “priority” must be identified to calibrate siting, management and operation
- ✓ **Define “role” of public/private sector in development, financing, rate**
- ✓ Must contribute to integrity of urban form – no more ugly garages and lots!

Garage Design

- ✓ Complementary facade
- ✓ Active ground floor
- ✓ Convertible space – if necessary

Garage Design – Considerations

- ✓ Entry/exit plaza design
- ✓ Location of elevators/pedestrian access
- ✓ Lighting
- ✓ Vehicle counter systems
- ✓ External signage/communications
- ✓ Conduit for pay stations/pay-to-park systems

These can apply to surface facilities too!

Shared Use

- ✓ Underutilized stalls shared with area business (weekdays, evenings, and weekends)
- ✓ Technology available to track and monitor usage and communicate available supplies
- ✓ Plan and construct management facilities (i.e., payment booth) up front (for possible future use)

These can apply to surface facilities too!

Neighborhood Considerations

- ✓ Traffic
- ✓ Spillover Parking
  - Implementation of "residential buffer zones"
  - Signage
  - On-street management
- ✓ Enforcement

Rule of Thumb #4

Know the Cost of Parking - Capacity

Typical Costs Per Parking Space

Location & Type	Land Costs *Per Acre*	Land Costs *Per Space*	Construction Costs *Per Space*	O & M Costs *Annual, Per Space*	Total Annualized Cost *Annual, Per Space*
Suburban, Surface	$50,000	$455	$2,500	$100	***$284***
Suburban, 2-Level Structure	$50,000	$227	$6,000	$200	***$788***
Urban, Surface	$250,000	$2,083	$2,000	$150	***$535***
Urban, 3-Level Structure	$250,000	$694	$8,000	$250	***$1,071***
Urban, Underground	$250,000	$0	$20,000	$350	***$2,238***
CBD, Surface	$1,000,000	$7,692	$2,500	$200	***$1,162***
CBD, 4-Level Structure	**$2,000,000**	**$3,846**	**$30,000**	**$300**	***$2,868***
CBD, Underground	**$2,000,000**	**$0**	**$40,000**	**$400**	***$3, 688***

Real cost of surface parking -- $64 to $125 per month

Real cost of structured parking -- $239 to $307 per month

The cost of parking

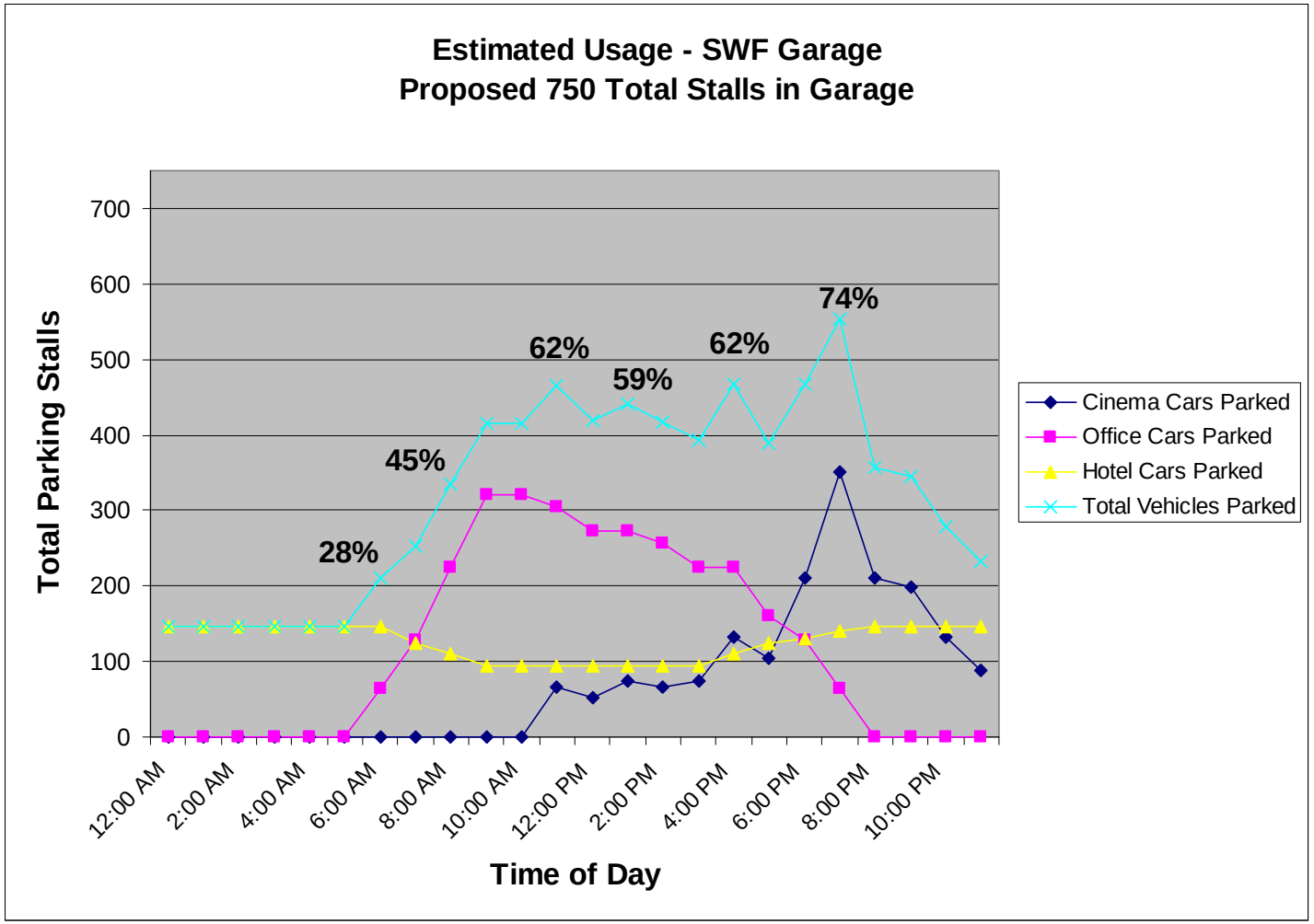
- **$35 - $45K per stall "fully loaded."**
- **$221 - $307 per stall per month to cover operating and debt.**
- **Requires combination of funding sources and equity.**
- **Works better with retail at ground level.**

- **Who is responsible for *"revenue" (debt coverage):* customer, employee, employer, property owner, public sector?**

Right Sizing – Required to Actual Demand

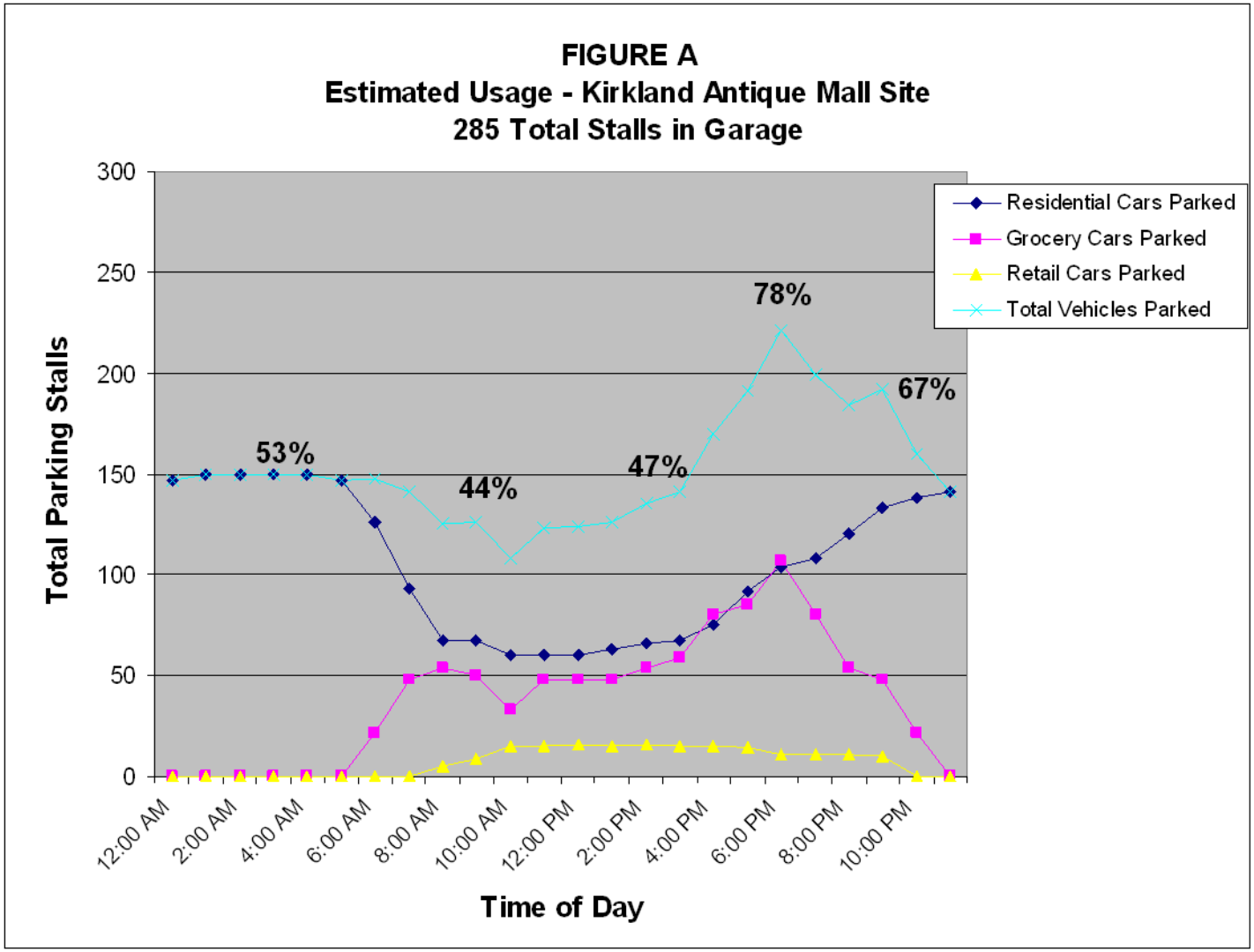
City	Minimum Requirement/1,000 SF Or Actual Built Supply	Actual Demand/1,000 SF	Gap between parking built and actual parking demand (for every 1,000 gsf)	Additional Cost to Development @ $30K per stall per 100,000 SF
Beaverton, OR	4.15	1.85	2.3	$6.9 million
Bend, OR	3.0	1.7 – 1.9	1.1 – 1.3	$3.3 - $3.9 million
Corvallis, OR	**2.0**	**1.50**	**0.50**	**$1.5 million**
Hillsboro, OR	3.0	1.64	1.36	$4.08 million
Hood River, OR	1.54	1.23	0.31	$930,000
Kirkland, WA	2.50	1.98	0.52	$1.56 million
Oregon City, OR	**2.0**	**1.43**	**0.57**	**$1.71 million**
Oxnard, CA	1.70	0.98 – 1.13	0.57 – 0.72	$1.7 - $2.2 million
Redmond, WA	3.5 max/4.10 built	2.71	0.79 – 1.39	$2.4 - $4.2 million
Sacramento, CA	2.0	1.60	0.40	$1.2 million
Salem, OR	**3.15**	**2.04**	**1.11**	**$3.3 million**
Seattle, WA (SLU)	2.50+	1.75	0.75	$2.25 million
Ventura, CA	2.59	1.34 – 1.54	1.05 – 1.25	$3.2 - $3.8 million

Right Sizing



- **775 stalls of “demand” in 575 spaces**

Right Sizing

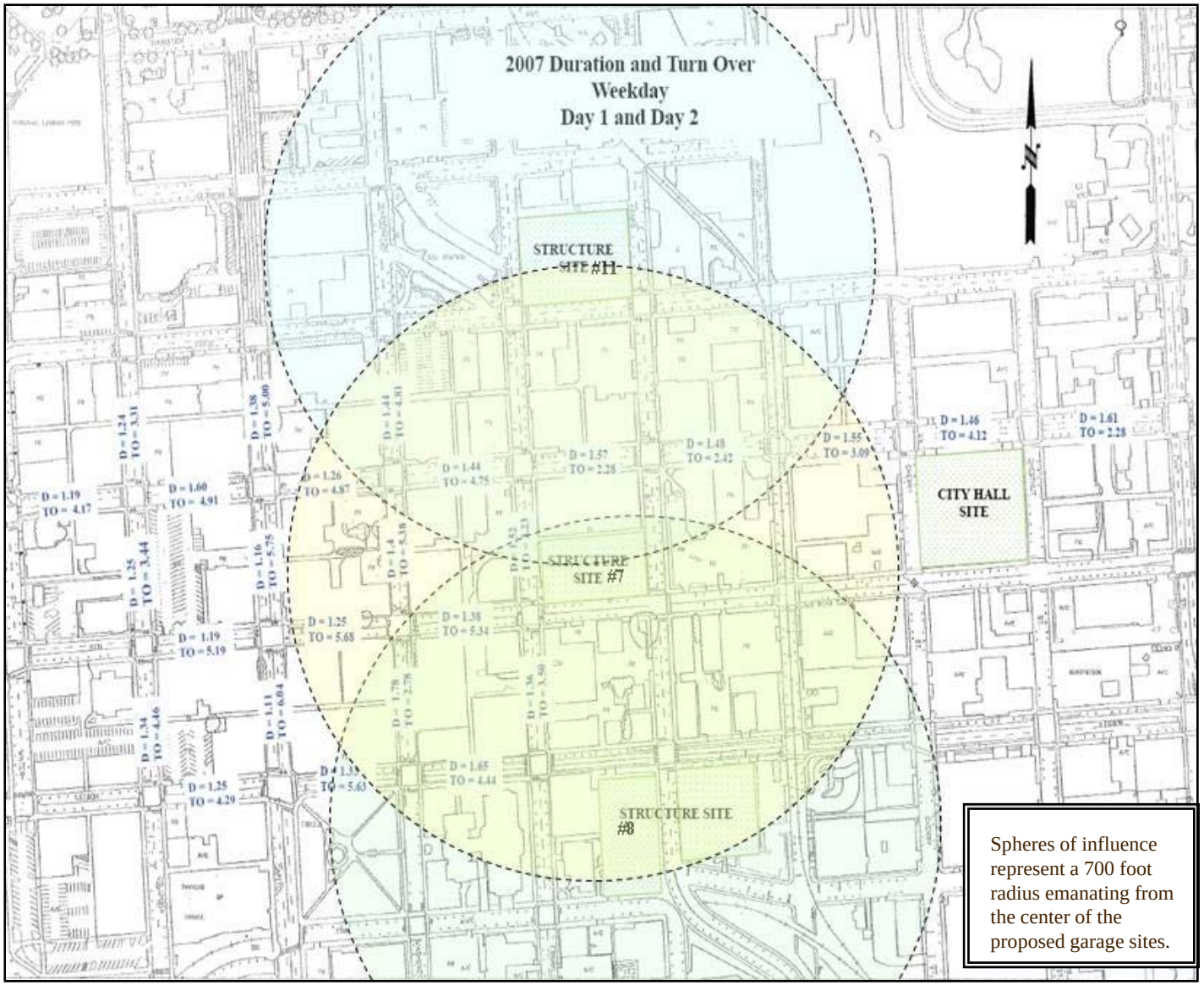


- **270 stalls of “demand” in 225 spaces**

Making it Pencil

Success Factors	Factors that reduce overall barriers to financing of parking
Paid Parking Environment	• Off-street parking facilities truly benefit when the on-street parking that surrounds them is metered. • Free on-street parking creates incentive for users to avoid a garage that charges for use of parking.
Constrained Parking	• Parking most successful when located in an environment that is already constrained for parking.
Land in City Control	• Potentially reduces carry cost of land. Can be used as incentive to private partner.
Proximity to: ***Weekday - Commuters***	• Is there commuter demand equal to ½ stalls built?
Proximity to: ***Weekday – Visitors***	• Dense ground level retail within 600 – 700 feet of site.
Proximity to: ***Evening Uses***	• Restaurant/bar activity and/or proximity to event venues (i.e., theaters, auditoriums, etc.)
Proximity to: ***Weekend Uses***	• Don't focus too heavily on commuter demand to lose flexibility for weekend uses.
Proximity to: ***Residential Uses***	• Particularly residential uses that are non-owner oriented (i.e., rental units).
Ground Floor Opportunity	• Use garage to provide retail base. Location near existing retail a plus
Ability to act as a catalyst	• Can it be sized to meet both existing and new demand, reducing future parking development costs?

Walk Isocrons – Garage/Lot Siting



Background: Springfield

GENERAL DOWNTOWN INFORMATION JANUARY 2008

	Individual Employers	Number Employees	Daily Customers	Unoccupied Sites	Residential Units
TOTALS	155	1,434	7,589	15	144

Hypothetical Impact of Status Quo
Based on Current Estimated Mode Splits

Mode	2008 Mode Split (est.)	2008 Employees	**2030 Mode Split**	2025 Employees	Net Change	% Change
Drive Alone	**87.0%**	1,248	**87.0%**	1,770	***522***	42%
Rideshare (RS)	**5.0%**	72	**5.0%**	101	***29***	29%
Bike/Walk	**3.0%**	42	**3.0%**	62	20	45%
Transit	**5.0%**	72	**5.0%**	101	29	40%
TOTAL	100%	1,434	100%	2,034	**600**	

# of new parking stalls to meet SOV / RS growth	552
Structured cost to meet employee parking demand	$17,644,000 ($29,440 per new employee)
Surface cost to meet parking demand	$4,968,000 ($8,280 per new employee)
Two 300 stall garages or 4.5 acres of surface parking	

Managed Parking Scenario – 10% Commute Shift

MODE CHANGES NECESSARY TO EXCEED STATUS QUO

Mode	2008 Mode Split	2008 Employees	**2025 Mode Split**	2025 Employees	Net Change	% Change
Drive Alone	**87.0%**	1,248	**78.0%**	1,587	***339***	27%
Rideshare	**5.0%**	72	**5.0%**	101	***29***	29%
Bike/Walk	**3.0%**	42	**7.0%**	142	100	238%
Transit	**5.0%**	72	**10.0%**	203	131	182%
TOTAL	100%	1,434	**100%**	2,034	**600**	

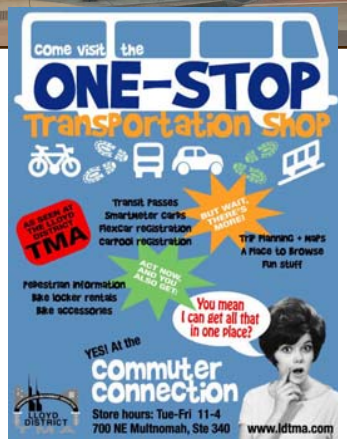
# of new parking stalls to meet SOV/RS growth 359

Structured cost to meet parking demand $11,488,000 ($19,147 per new employee)

Surface cost to meet parking demand $3,231,000 ($5,385 per new employee)

Development Cost Savings $1.74 - $6.16 million (unfinanced)

Transportation Demand Management



- ✓ Transit Marketing & Information
- ✓ Financial Incentives/Subsidies
- ✓ Shuttle Systems
- ✓ Bus Shelter Improvements
- ✓ Bicycle Parking & Infrastructure
- ✓ TDM Support Programs / TMA's
- ✓ Requirements on New Development

Are there alternative mode goals that the community wants to strive toward?

What if Mode Splits Changed?

	% of Employees Driving Alone (SOV Mode Split per 1,000 gsf)					
Employee SOV's per 1,000 gsf	80%	75%	68%	65%	60%	55%
4	3.2/1,000	3.0/1,000	2.72/1,000	2.6/1,000	2.4/1,000	2.2/1,000
5	4.0/1,000	3.75/1,000	3.40/1,000	3.25/1,000	3.00/1,000	2.75/1,000
	Cost of Parking Per 100,000 gsf of development					
4	$10.24 mil	$9.6 mil	$8.7 mil	$8.3 mil	$7.7 mil	$7.0 mil
5	$12.8 mil	$12.0 mil	$10.9 mil	$10.4 mil	$9.6 mil	$8.8 mil

- **The difference between 80% and 68% mode split is about $1.7 million per 100,000 gsf built (@ $32,000 per stall).**
- **Should commuter parking "maximums" be tied to mode split goals?**
- **Would getting more employees into alternative modes be a reasonable element of a sound economic development plan?**
- **Focusing parking investment on visitors!!**

Parking has Value –Case Study

72	Employees parking on-street)
5	Potential trips per space (in 10 hr. workday)
360	Potential customer trips per day
360	Customer trips per day
$20	Average amount spent by each customer/trip
$7,200	Potential daily revenue unrealized
$7,200	Daily revenue potential
300	Shopping days in a year
$2,160,000	Total annual potential revenue unrealized
$30,000	Annual Retail Revenue Value of a Parking Stall
$100	Daily Sales Value of a Parking Stall @ 5 turns
$0.00	Daily Revenue Value of an Employee Stall in Springfield.

Rule of Thumb # 5
Parking Development Funding Options

Options Affecting Customers

- ✓ User fees – i.e., hourly parking rates.
- ✓ On-street fees

Options Affecting Businesses

- ✓ Business Improvement District (BID/BIA) Assessments
- ✓ Parking Tax

Options Affecting Property Owners

- ✓ Local Improvement Districts (LID)

Options Affecting Developers

- ✓ Fees in Lieu

Options Affecting Government

- ✓ Bonds – GO or Revenue
- ✓ Public Facilities Districts / 63-20 Financing
- ✓ Urban Renewal

✓ Most publicly owned facilities combine multiple funding sources to “pencil” a garage and/or lot.

STOP and Ask Yourself

- ✓ **What is the "right size" of parking development?**
- ✓ **What is the <u>true value of a parking space</u>?**
- ✓ **Who/whom is my <u>priority</u> customer?**
- ✓ **What are the <u>trade offs</u> I must make to assure that my priority customer is accommodated?**
- ✓ **What do I mean when I say "<u>balanced</u> parking system?**
- ✓ **<u>Who is responsible</u> for employee versus customer parking development and its costs?**
- ✓ **Are parking stalls the only tool in our tool box as we manage access and capacity?**
- ✓ **What is the <u>best way to spend money</u> on downtown access?**

Tools For Parking Management

- ✓ Identify/develop “champions”
- ✓ Lower/eliminate minimum parking requirements
- ✓ Establish maximum parking development standards (ratios) tied to transit/bike/walk mode split goals
- ✓ Do not be afraid to discuss charging for parking.
- ✓ Develop and adopt decision-making “triggers”
- ✓ Invest in multiple forms of capacity and create incentives
- ✓ Know the market, parking priorities and quantify value.
- ✓ Use technology to improve understanding of parking and simplify parking for users.

"People do not come downtown to park!"

- ✓ What parking management <u>is not</u>
  - **Bad, evil**
  - **A be all, end all solution to downtown revitalization**
  - **The most successful downtowns have high parking constraints**

- ✓ What parking management <u>is</u>
  - **Good business**
  - **A development tool to support desired economic uses**
  - **One of several strategies necessary to promote economic vitality**
  - **A *<u>commitment</u>* to priorities**

"The most successful downtowns have the highest parking constraints"

YOUR QUESTIONS?