

Cumberland Avenue Corridor Project

Parking Study

September 2008



Prepared by the Knoxville Regional Transportation Planning Organization
in cooperation with the Knoxville-Knox County Metropolitan Planning Commission
for the City of Knoxville Office of Policy and Communication



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Acknowledgements

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City of Knoxville Department of Policy and Communication
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Cumberland Avenue Advisory Board

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Chapter 1: Study Purpose and Objectives

Public parking was one of the most frequently mentioned problems by area stakeholders during the Cumberland Avenue Corridor Planning process. That process resulted in an adopted plan, *A History of Connection: Cumberland Avenue Corridor Plan*, that recommends developing a public parking resource for the Cumberland Avenue District by coordinating with Fort Sanders Regional Medical Center, East Tennessee Children's Hospital, and the University of Tennessee (UT). One of several strategies highlighted included developing shared parking resources that would serve as part of each stakeholder's long-term parking plans¹.

This parking study seeks to assist in implementing the Cumberland Avenue Plan's vision of a corridor that supports a mix of uses, encourages a pedestrian-

friendly environment, and serves as an attractive gateway to the City, the hospital campuses and the University. One of the primary goals of the parking study is to improve the overall character of the street and define the role parking has in the District.

With the redesign of Cumberland Avenue, walking and biking conditions will improve, and as they do the likelihood of visitors parking in one location and walking to multiple destinations within the area will increase. Creating a "park once" environment reduces the amount of parking required at each destination. This allows for lots that would have been devoted to parking be utilized for a wider variety of uses that enhance the District and are both pedestrian- and bicycle-friendly. This type of environment is especially important for the Cumberland Avenue District, which contains not only the City's densest neighborhood but is also home to three major employers in the City; Children's Hospital, Fort Sanders Regional Medical

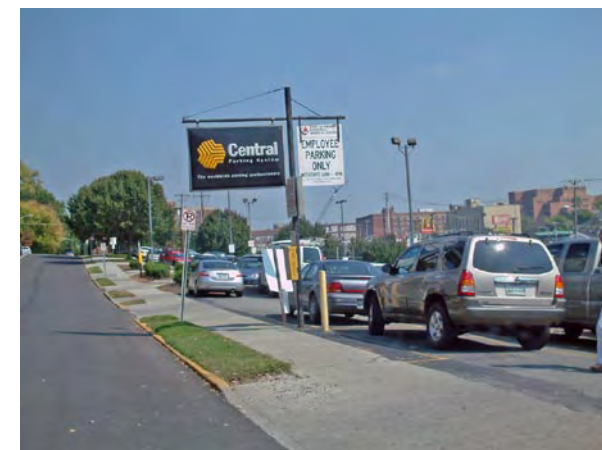
Center and UT. This parking study is the first step toward creating a comprehensive parking management strategy that will turn the Cumberland Avenue District into a "park once" District.

Study Overview

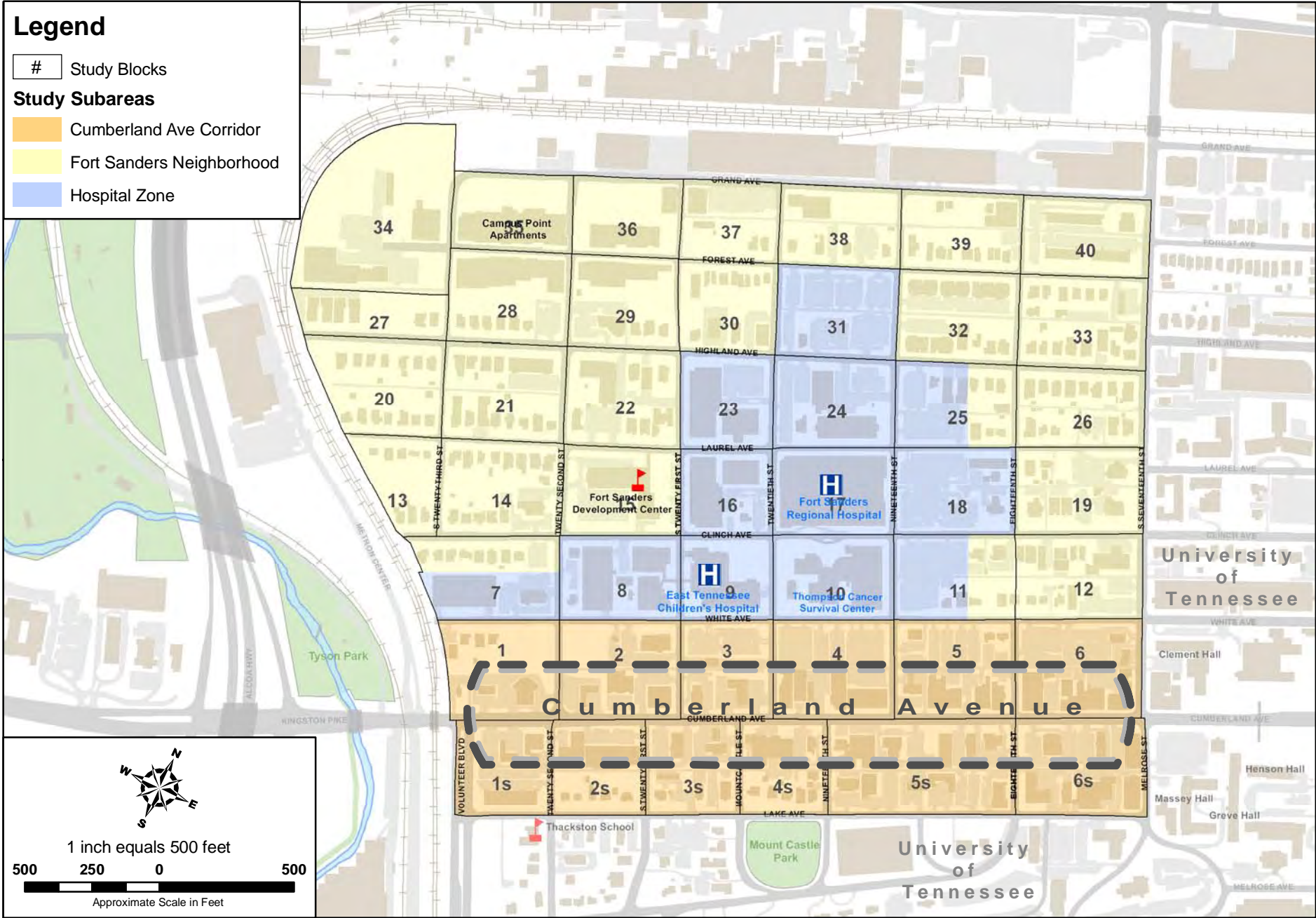
Key parking related issues identified as part of the Cumberland Avenue Corridor Planning process were as follows:

- The need for a corridor that serves as a gateway to the City and balances the needs of all users, pedestrians, bicyclists, and motorized vehicles.
- The significant amount of land along Cumberland Avenue and around the hospitals in the Fort Sanders neighborhood devoted to surface parking lots.
- The pattern of surface parking lots and structures in the area.
- The ownership and management of these lots by multiple entities.

¹A History of Connection: Cumberland Avenue Corridor Plan. Adopted by the Knoxville City Council on May 8, 2007



Map 1: Study Area



MPC has analyzed existing parking conditions and provided background information to assist the City of Knoxville in determining future parking needs along Cumberland Avenue. An examination of potential changes to off-street parking requirements for the corridor are being examined through a new form-based code for the District to determine whether changes will further the City's transportation, economic development and environmental goals.

The Cumberland Avenue parking study showed the District does have adequate parking at no to low cost within close proximity of the corridor itself, the hospitals and the Fort Sanders neighborhood. However, lack of consistent enforcement of on-street parking, appropriate signage and publicly owned and operated parking creates a sense that there is not enough parking available.

This study included an inventory of the existing parking, a parking utilization study, a merchant's survey, and a peer review. The parking study is expected to help the City plan for ways to alleviate current and future parking issues in the Cumberland Avenue district. There is a clear potential to work



with Fort Sanders Regional Medical Center, Children's Hospital, and the University to strategically plan for future parking garages to accommodate shared parking that would serve both the Cumberland Avenue merchants and the institutions.

The result of this study are recommendations on effective parking management strategies that support transit, pedestrian and bicycle use and enhance the physical and economic environment of the corridor as well as identify potential funding sources for future improvements.

In summary, the goals of the parking study were as follows:

- To assess current and projected district parking needs;
- To evaluate shared parking options; and
- To identify funding sources for parking and streetscape improvements².

The study area is focused along Cumberland Avenue from 23rd Street to 17th Street and from Grand Avenue in the north to Lake Avenue south of Cumberland Avenue.



Related Studies

At part of this analysis, previous parking and transportation reports related to the Cumberland Avenue area parking study were identified and reviewed. Brief written summaries were prepared for the following related studies and provided in Appendix B.

- Traffic Safety Plan for Fort Sanders Neighborhood
City of Knoxville Traffic Engineering Division
(October 2004)
- Cumberland Avenue Traffic Signal Basic Inventory Report
URS
(November 2006)
- Cumberland Avenue Corridor Plan
Glatting Jackson Kercher Anglin, Inc.
(April 2007)
- Fort Sanders Regional Medical Center Traffic Study
Wilbur Smith Associates
(February 2008)
- Fort Sanders Regional Medical Center Parking Study
Wilbur Smith Associates
(February 2008)

²A History of Connection: Cumberland Avenue Corridor Plan. Adopted by the Knoxville City Council on May 8, 2007. pg. 7-4.

Chapter 2: Parking Inventory & Utilization Survey

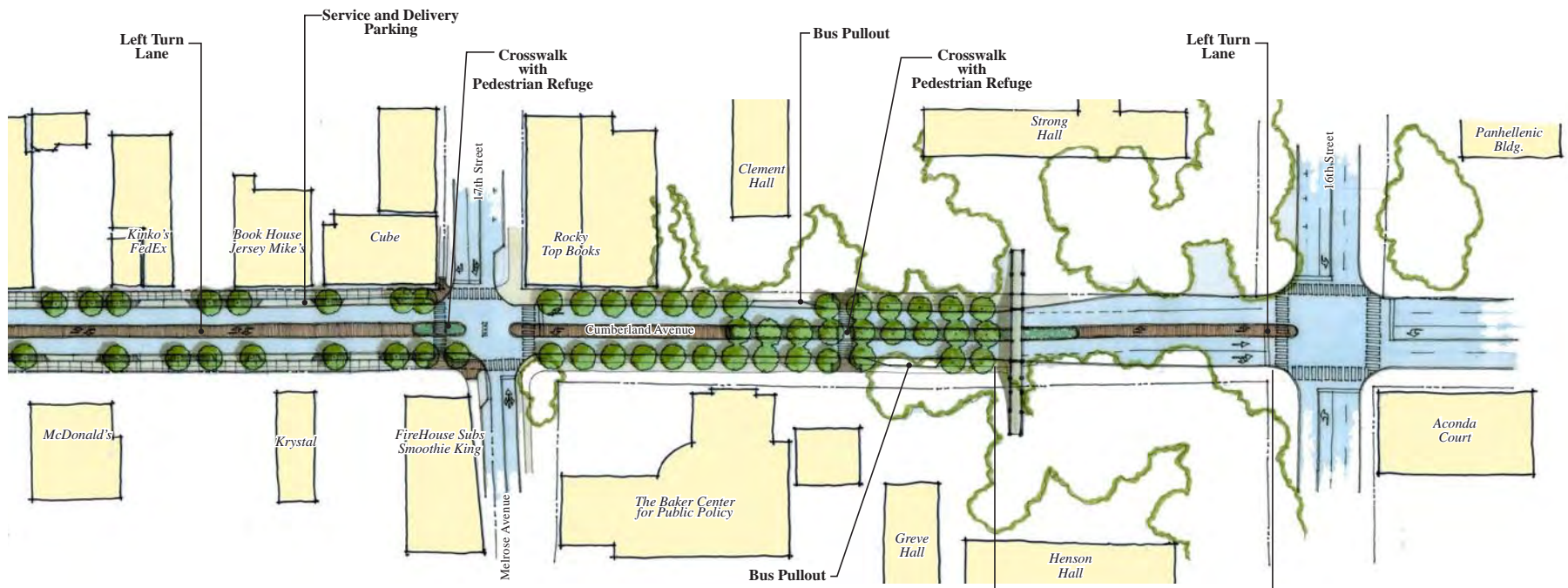
As part of the study, a parking inventory and an on-street parking utilization analysis was conducted. The inventory includes all parking spaces – an estimated number of parking spaces, owner (in the majority of cases), who is allowed to park, cost, and any time restrictions. These two measures of parking use form the basis of typical parking studies. Counting cars parked allows you to calculate occupancy, the measure of how many of the available spaces are occupied. Vehicles parked divided by the number of spaces inventoried is occupancy. Occupancies of 85-90 percent are usually considered full, since

someone looking for a space will not find an empty one easily and may need to circle a few times before one becomes available.

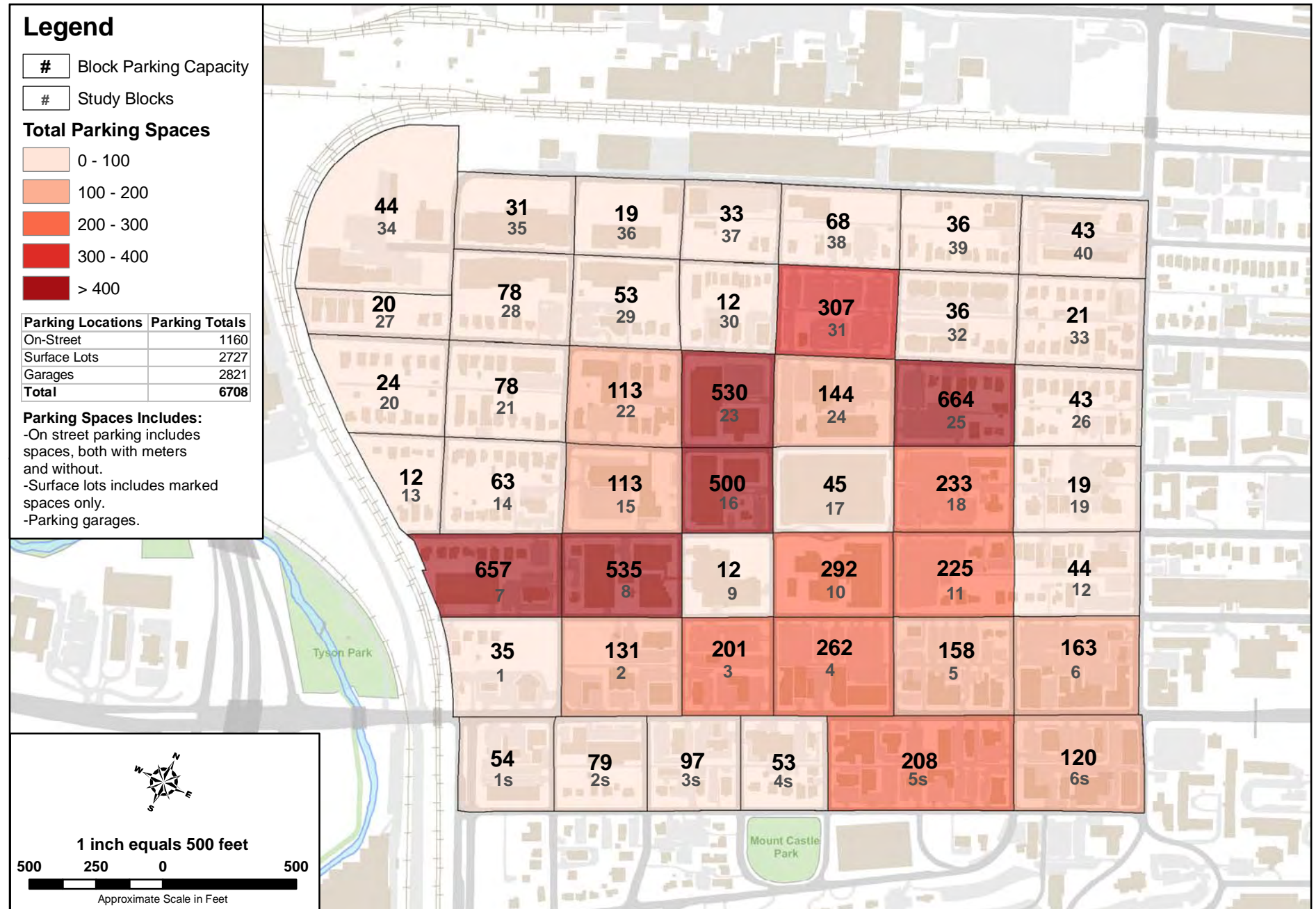
Map 2 illustrates the pattern of surface lots and parking garages in the study area. The University's parking approach has been to locate new parking on the periphery of campus. The hospitals have followed a similar strategy with their parking garages located within a three to four block area focused on Highland Avenue and 22nd Street. A significant amount of land along the Cumberland Avenue corridor and around

the hospitals is taken up by surface parking lots owned and managed by many different entities. These private parking areas are tightly controlled.

The Cumberland Avenue parking study showed that the District does have adequate parking at no to low cost within close proximity of the corridor itself, the hospitals and the Fort Sanders neighborhood. However, lack of consistent enforcement of on-street parking and appropriate signage and the absence of publicly owned and operated parking creates a sense that there is not enough parking available.



Map 2: Parking Inventory



Parking Inventory

The parking inventory for the Cumberland Avenue district identified a supply of approximately 6,700 parking spaces (both on-street and off-street) within a 46-block area. All off-street parking located in the Cumberland Avenue district is privately owned and operated.

Curb Parking & Loading Zones

Of the 1,160 on-street (curb) parking spaces, 203 are metered. There are approximately 38 curb parking spaces with restricted time limits defined by traffic signs. Most of these parking spaces are restricted by signs for 1 to 2 hours. There are no time restrictions posted for approximately 919 curb spaces. On several blocks the meter pattern is inconsistent. Some spaces are metered while others have had meters removed.

There are currently no service delivery pull-outs for businesses within the Cumberland Avenue district except adjacent to Children's Hospital and Fort Sanders Regional Medical Center. As a result of the lack of delivery pull-outs, trucks will typically block a lane of traffic or pull up on the curb. This is disruptive to vehicle and pedestrian flow. The Cumberland Avenue Corridor Design Plan calls for accommodating service and delivery vehicles on side street, alleys or in designated pull-out locations along Cumberland Avenue³. The relocation of deliveries from Cumberland Avenue to alleys and side streets will reduce these disruptions.

³A History of Connection: Cumberland Avenue Corridor Plan. Adopted by the Knoxville City Council on May 8, 2007. pgs. 4-3, 4-7, 4-8, 4-9.

⁴This number does not include all of the parking lots associated with individual businesses within the district, just those located closest to Cumberland Avenue.

Off Street Parking

The Cumberland Avenue District study area includes seven parking garages and more than 90 surface lots. A cursory examination of property ownership records shows that there are approximately 15 different owners of private lots within a 12-block area adjacent to Cumberland Avenue⁴.

Two of the major operators of off street parking spaces are Fort Sanders Regional Medical Center and Children's Hospital. They own and operate over one-half of the available parking within the district. (See Table 1) The majority of this parking is restricted during regular business hours (7 a.m. – 6 p.m.) to hospital facility users such as staff, patients, and visitors. Although the University of Tennessee does not own any parking within the Cumberland Avenue District, they do have two parking garages located just outside of the study area. One parking garage is located just south of Lake Avenue adjacent to Mount Castle Park and provides 966 parking spaces for students and employees of the University. The second University-owned parking garage is located on White Avenue, east of 17th Street. This garage supplies 860 parking spaces for students and employees.

Table 1: Major Parking (surface and garage) Owners

Property Owner	Number of Spaces
Childrens Hospital	1168
Fort Sanders Regional Medical Center	1941
Total	3109

The remaining 2,439 off-street parking lots are owned and operated by a variety of private entities. They each have their own parking restrictions, and it appears that the restrictions are strictly enforced. There are currently five privately operated lots that are open to the public (see Table 2 below). Four of these lots are open to the public all day and one is open to the public between the hours of 4 p.m. and 6 a.m. These lots charge between \$3 and \$6 per day.

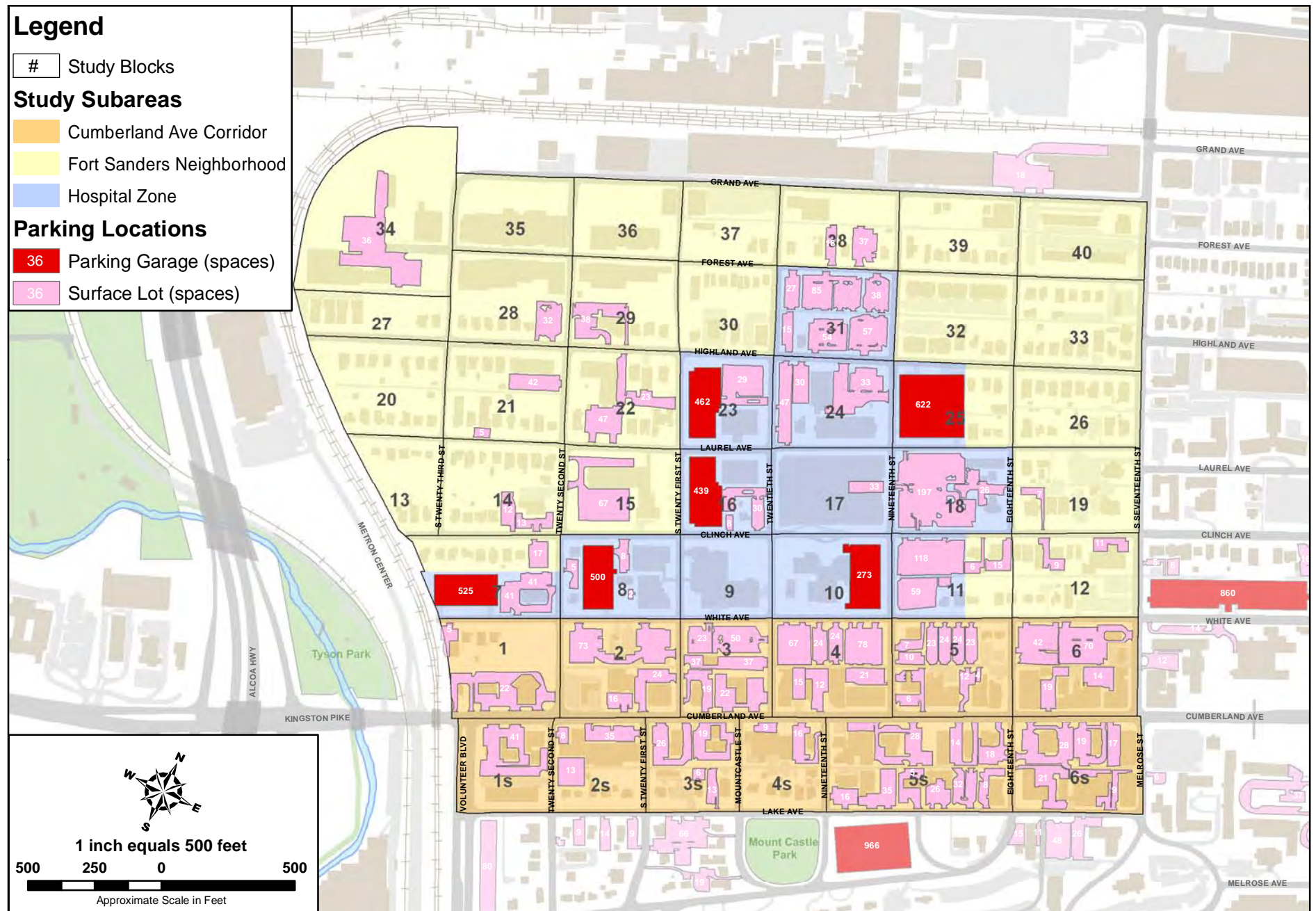
On-Street Parking Utilization

In addition to the parking inventory, staff conducted hourly counts during three different time periods for on-street parking on representative weekdays and a weekend period. The utilization portion of the study was conducted during the week of November 26, 2007, and only for a portion of the study area. This

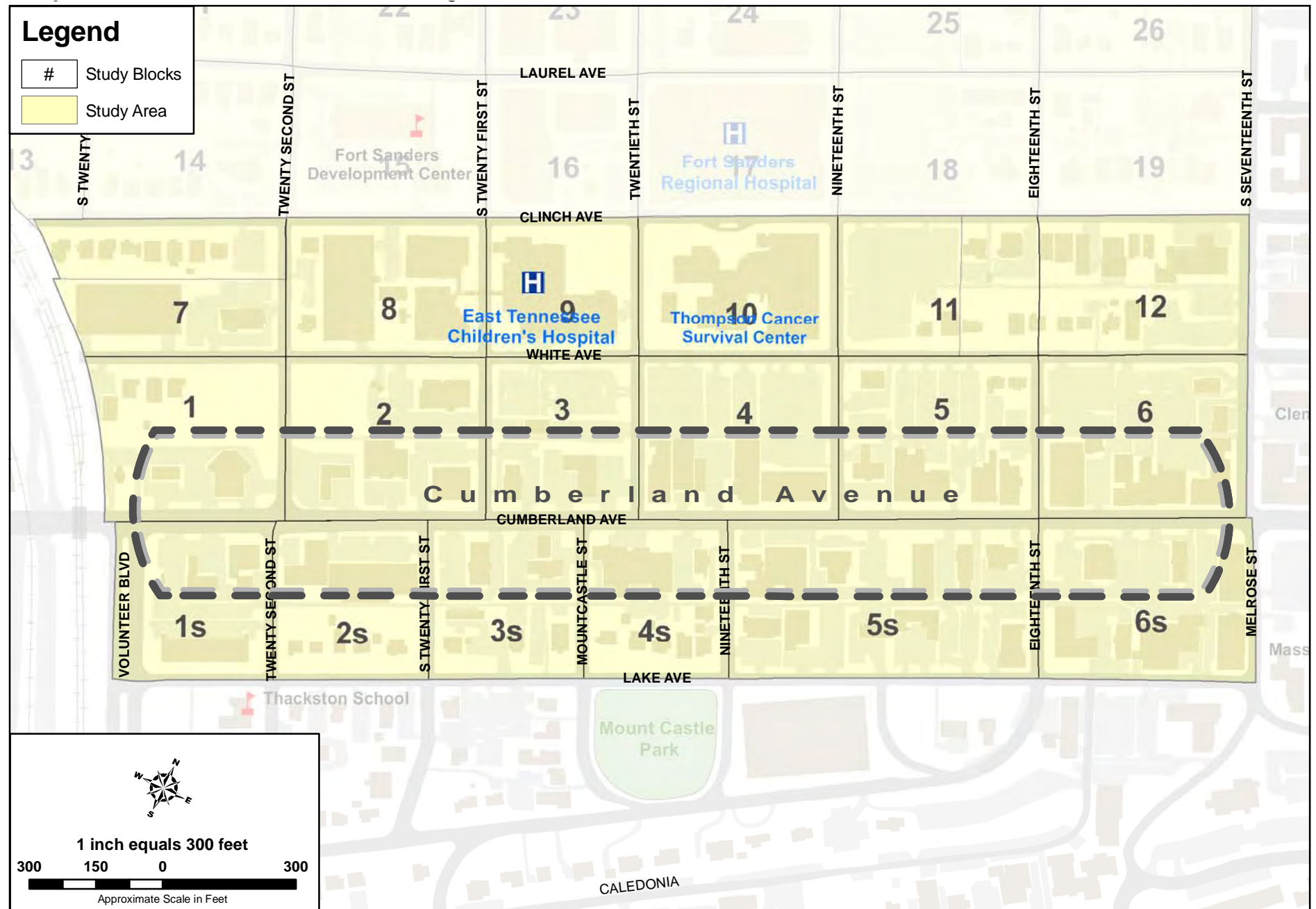
Table 2: Publicly Available Off-street Parking

Location	Hours Publicly Available	Cost	Spaces
South of White between 19th & 20th	4pm - 6am	\$3.00/day	192
South of White between 17th and 18th	All day	\$3.00/day	113
North of White between 17th & 18th	All day	\$2.00/day	55
20th & Laurel (north side)	All day	\$6.00/day	76
North of Lake (mid-block) between 18th & 19th	All day	\$5.00/day	28
Total			464

Map 3: Existing Parking Garage and Surface Lot Locations



Map 4: Parking Utilization Study Area



portion included 12 blocks between 17th Street and 22nd Street from White Avenue to Lake Avenue.⁵ (See Map 4.) Utilization counts took place on Wednesday, Thursday and Saturday from 10 to 11 a.m. and from 2 to 3 p.m.

The average occupancy rate for the time periods surveyed within the subareas was 89 percent. As mentioned previously, occupancies of 85-90 percent are usually considered full, since someone looking for a space will not find an empty one easily and may need to circle the block a few times before one becomes available. However, based on inconsistent enforcement of on-street parking and the lack of publicly available or shared parking opportunities there is a perception that parking is free. Adjacent surface pay lots are underutilized during these peak-periods primarily because drivers are seeking free parking.

Parking Characteristics

Public parking within the district is limited. There is no shared parking and private parking areas are strictly controlled. The University's parking approach has been to locate new parking on the periphery of campus. Several of these lots are located on the edge of the Cumberland Avenue District but are not available for public use. The hospitals have located their parking garages within a 3 to 4 block area



focused on Highland Avenue and 22nd Street. The lack of shared parking in the area is evident when, during business hours, private parking lots, private garages, and on-street parking spaces are full while a significant amount of parking spots in privately controlled public lots are vacant.

Driver apprehension about parking in poorly marked, privately owned and operated public lots within the District exists. Many of these lots are not staffed by an attendant and many have developed a reputation for towing even if fees are paid. None of these privately owned public lots issue receipts for fees paid. In addition, poorly marked lots and aggressive agreements between towing companies and merchants/parking lot owners have created uncertainty regarding whether these lots can be used by the public.

According to an analysis of block data, the district currently has a typical suburban parking ratio of almost four parking spaces per 1,000 square feet of commercial space. However, this parking is not available for use to all visitors to the District. It is estimated that a significant portion of the available parking is being utilized by university commuters and hospital staff and visitors.⁶

Major Parking Generators

The primary parking generators in the Cumberland Avenue district include the hospitals, the University and the businesses along Cumberland Avenue. The Fort Sanders Regional Medical Center has been in the Cumberland Avenue District since 1919. East Tennessee Children's Hospital has been located within the Cumberland Avenue district since 1937.

Each hospital employs approximately 3,000 people in this location, and each has plans to grow and expand within the district. Although the University does not have any facilities located within the study area, they are still considered a major parking generator within the district. Many students reside in the Fort Sanders neighborhood, and commuting students use the on-street parking. Additional housing is being built for students within the district and both staff, students, and neighborhood residents patronize the businesses located along Cumberland Avenue. In addition, commercial businesses located along the Cumberland Avenue corridor generate their own traffic and create parking needs for both customers and staff.

Parking Enforcement

On-street parking enforcement is inconsistent and often nonexistent within the Cumberland Avenue District. The City of Knoxville's police department enforces on-street parking. Typically, enforcement of parking time limits and meters is not conducted on an hourly or daily basis. This discourages turnover of on-street parking by creating spaces for university commuters, employees and others to park all day.

All revenues from on street parking meters and parking violations go into the City General Fund. It is undesignated, that is, it is used for all general fund purposes.

⁵The entire study area was not included in the utilization portion of the survey because the greatest areas of parking concern appear to be occurring within a one or two block radius of the Cumberland Avenue corridor.

⁶Knoxville-Knox County Metropolitan Planning Commission (2007), *A History of Connection: Cumberland Avenue Corridor Plan*.

Existing Land Use

The pattern of existing land use reflects the significant influence the University and the hospitals have on the district. The Cumberland Avenue corridor sits in the middle of an expanding pattern of institutional uses and a densifying historic district. The University and the hospital buildings are characterized by large-scale structures encompassing large blocks. Intermingled within the Fort Sanders neighborhood are small-scale homes and buildings that include single-family residences and multi-family student housing. Large apartment complexes geared towards students are now being constructed at the periphery of the district. The businesses along Cumberland Avenue are generally small-scale buildings built within a historic block pattern.⁷

Parking takes up a significant amount of land within the District. Presently, 25 percent of the land within the study area is used for parking. See Table 3 for a summary of the parking space requirements for the zoning districts currently found in the Cumberland Avenue study area.

⁷Knoxville-Knox County Metropolitan Planning Commission (2007), *A History of Connection: Cumberland Avenue Corridor Plan*.

⁸City of Knoxville South Waterfront Code. City of Knoxville. Access online 6/10/08 at: http://www.cityofknoxville.org/southwaterfront/code/04_intro.pdf.

Table 3: Existing Parking Requirements by District

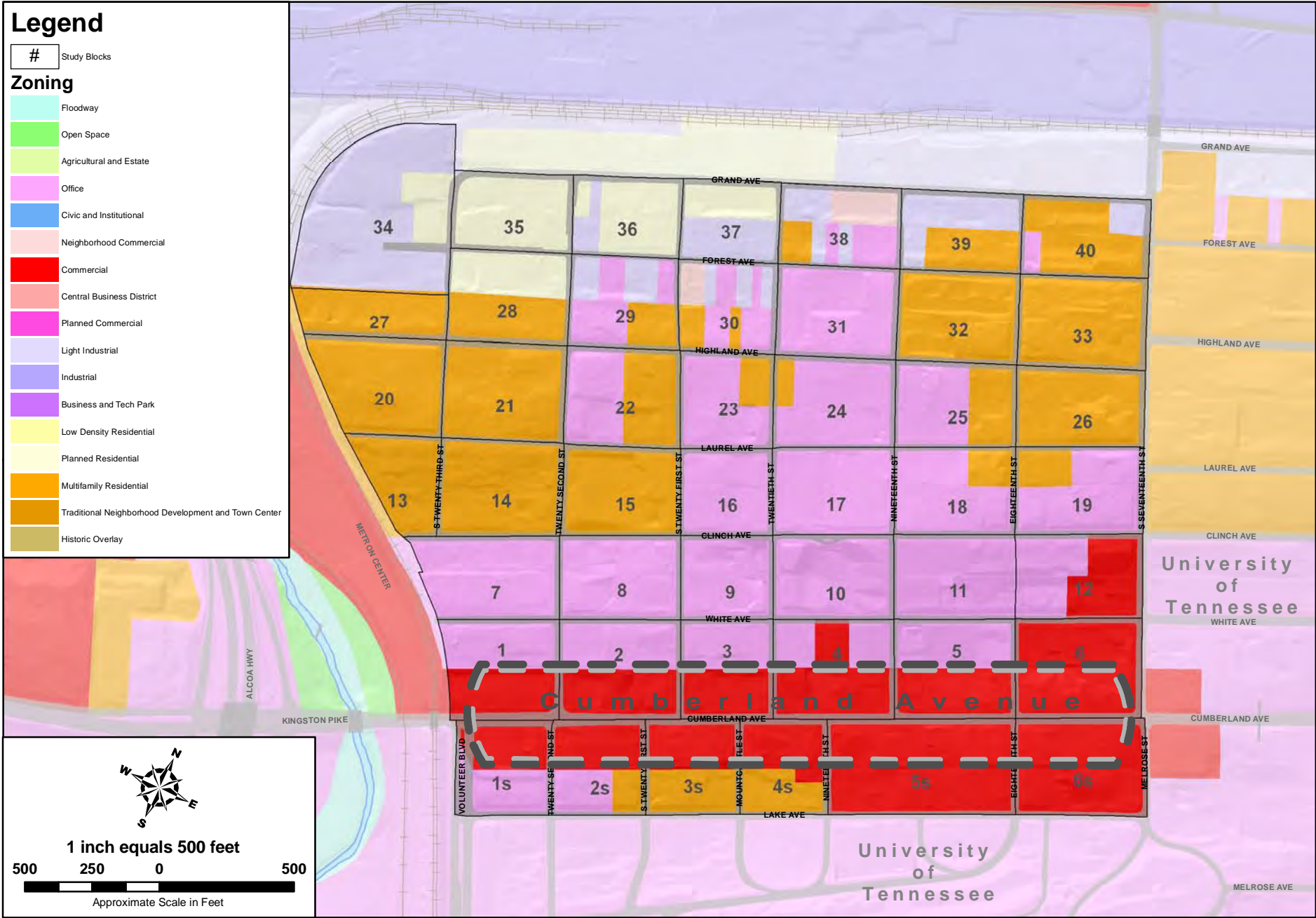
Zoning District	Parking Spaces Required	
	Residential	Non-residential
C-7	1.5- 2/unit	0
Multi-family Residential	2/unit	NA
Light Industrial	NA	1/two employees
Office	NA	1/250 sq.ft

The C-7 Pedestrian Commercial District encompasses approximately 9 blocks and is under revision. The Cumberland Avenue Corridor Plan calls for rewriting the C-7 District Regulations and developing a new form-based code that will guide the redevelopment of the district. Form-based codes de-emphasize land use in favor of building form and typology. They encourage a greater mix of uses and housing types and place stronger emphasis on the design of the public realm. Form-based codes are also more graphic-intense and easier for people to understand than traditional zoning⁸.

With future land use changes parking requirements will have to evolve beyond single-purpose reserved parking that is uncoordinated and fragmented. The new Cumberland Avenue form-based code contains parking regulations that minimize the amount of land necessary for parking within the district. However, in order for the district to evolve beyond single-purpose parking and its negative impacts on the pedestrian environment, adoption of the form-based code will have to be coupled with the implementation of the parking management strategy as outlined in Chapter 5.



Map 5: Existing Zoning Map



Chapter 3: Future Development & Parking Needs

This chapter is based on the redevelopment analysis outlined in the Cumberland Avenue Corridor Plan. The plan outlines two build-out scenarios: 1) along Mountcastle Park and 2) along Cumberland Avenue from 17th Street to West Volunteer Boulevard. The numbers used reflect one possible build-out scenario for each area that might occur as redevelopment takes place. The estimated square footage and parking figures required to support the redevelopment were provided in the Corridor Plan. These estimated figures can be used to assist the City in anticipating the impact of future development on parking needs within the District. Below is a summary of the analyses provided in the Corridor Plan.⁹

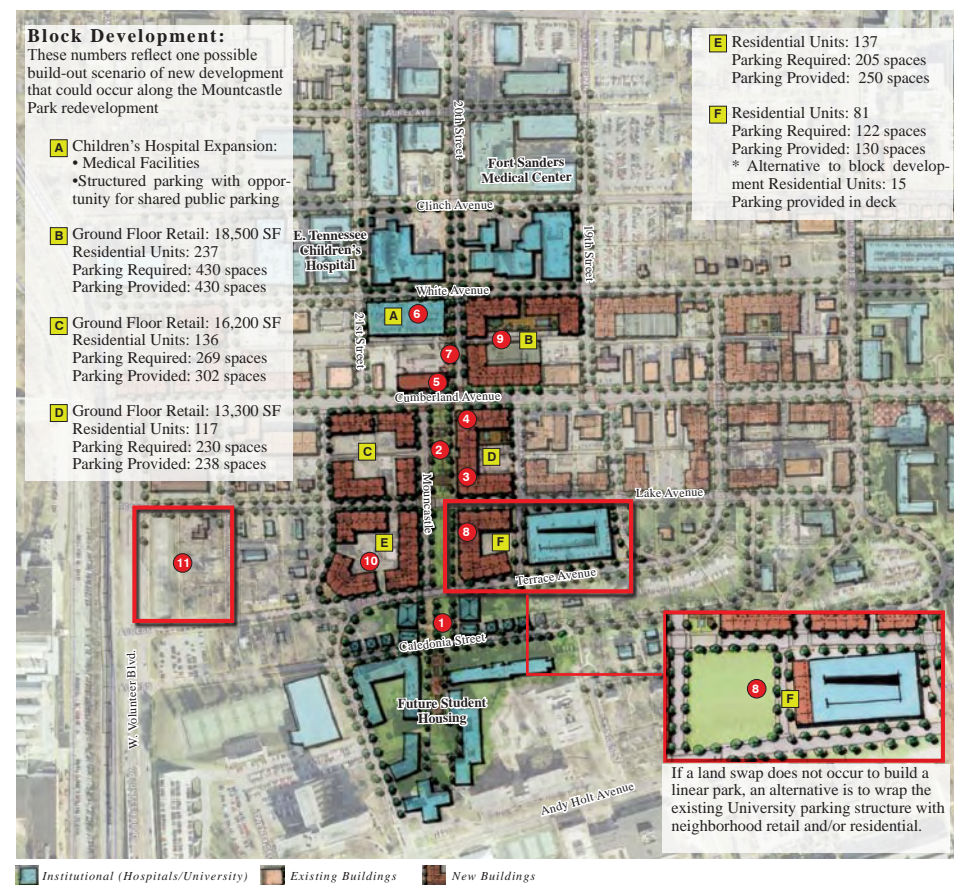
Scenario 1: Mountcastle Park Redevelopment

The Mountcastle Park redevelopment scenario proposes turning the existing Mountcastle Park into a linear green space to provide a more cohesive connection from the University to the Cumberland Avenue corridor and the hospitals. Two key assumptions of this scenario are:

- The area will include mixed-use developments that incorporate housing, retail, University facilities, and hospital expansion oriented to the park.
- A coordinated effort will be made to create new shared, public parking structures, planned by the hospitals, the City and the University along or adjacent to the park.

This scenario calls for approximately 1,260 parking spaces to support the anticipated uses. Currently, this area has approximately 1,880 parking spaces available on street and within private parking lots and garages. The linear park would remove some on-street parking within this area if implemented. However, despite the removal of some spaces, the redevelopment scenario still requires less parking than currently available.

⁹Knoxville-Knox County Metropolitan Planning Commission (2007), *A History of Connection: Cumberland Avenue Corridor Plan*. Pg. 5-3 – 5-4.



Key Concepts:

- Enhance the future student housing development that is planned, as a part of the University Master Plan, to include an open space connection to Mountcastle Park.
- Encourage redevelopment of block to include a linear public green that connects Cumberland Avenue to Mountcastle Park and proposed University expansion.
- Encourage mixed use development along linear park.
- Activate the corner of Cumberland and Mountcastle and Cumberland and 20th with commercial along the ground floor and residential or office above.
- Encourage development of a landmark building at corner of Cumberland and 20th.
- Planned expansion of Children's Hospital. The proposed structured parking could include dedicated public spaces.
- Enhance streetscape and building setback along 20th Street to provide a visual connection between the hospitals and Cumberland Avenue.
- Create new University development along existing Mountcastle Park to "wrap" existing parking structure and reconfigure the park to get fronting development.
- Utilize alleys as entrances to parking structures.
- Encourage University parking facility to include public spaces.
- Planned future University parking facility could be coordinated to include public spaces.

Scenario 2: Cumberland Avenue Corridor Redevelopment

The Cumberland Avenue Corridor redevelopment scenario includes 17th Street to West Volunteer Boulevard, including the blocks between White Avenue and Lake Avenue. The scenario illustrates a wide variety of redevelopment options that include single parcels, half blocks and full blocks. Several key elements of this scenario include:

- The development of active retail along Cumberland Avenue.
- The utilization of the topography to “tuck” parking underneath buildings and into hills.
- Placing parking behind buildings and keeping alleys open.

This scenario calls for approximately 2,290 parking spaces to support the anticipated uses after redevelopment. Currently, this area has approximately 2,700 parking spaces available on street and within private parking lots and garages.

Table 4 indicates that the areas that these two redevelopment scenarios encompass currently have adequate parking to support the proposed build outs with a surplus of 1,030 parking. However, adequate parking is not enough. Parking locations need to

The Strip

Focused on Cumberland Avenue from 17th Street to West Volunteer Boulevard, including the blocks between White Avenue and Lake Avenue, this section illustrates the range of possible development. Development could occur at the scale of a single parcel, a half block, or a full block. The vision is to “transform the strip to a place” by:

- Reinforcing the importance of the street by forming buildings along street frontages and locating parking behind (in lots or structures).
- Anticipating the long-term and short-term potential for intensified housing developed in mixed-use projects.
- Strengthening active retail uses along Cumberland Avenue.

Key Concepts:

- 1 Potential exists to take advantage of existing topography throughout the Cumberland area by tucking parking into the hill and beneath buildings.
- 2 Development along Cumberland Avenue should have active street-level uses with residential or office above.
- 3 Alleys should be kept open and be use for access into parking structures and vehicular movement throughout the Cumberland Avenue area.

- 4 Redevelopment can occur at both the full block level and the parcel level.
- 5 Enhance pedestrian connections across Cumberland Avenue to adjacent institutional uses and neighborhoods.
- 6 New parking for development should be placed behind the development with vehicular access from the alleys and pedestrian access from Cumberland.



Block Development: These numbers reflect one possible build-out scenario of new development that could occur along Cumberland Avenue.

A Ground Floor Retail: 21,600 SF Residential Units: 160 Parking Required: 326 spaces Parking Provided: 329 spaces	B Ground Floor Retail: 18,600 SF Residential Units: 68 Parking Required: 177 spaces Parking Provided: 208 spaces	C Children's Hospital Expansion Medical Facilities Structured parking with opportunities for shared public parking	D Ground Floor Retail: 18,500 SF Residential Units: 237 Parking Required: 430 spaces Parking Provided: 430 spaces	E Residential Units: 92 Parking Required: 138 spaces Parking Provided: 144 spaces	F Ground Floor Retail: 13,200 SF Residential Units: 167 Parking Required: 304 spaces Parking Provided: 320 spaces
G Ground Floor Retail: 16,200 SF Residential Units: 136 Parking Required: 269 spaces Parking Provided: 302 spaces	H Ground Floor Retail: 13,300 SF Residential Units: 117 Parking Required: 230 spaces Parking Provided: 238 spaces	I Residential Units: 49 Parking Required: 74 spaces Parking Provided: 76 spaces	J Residential Units: 84 Parking Required: 126 spaces Parking Provided: 126 spaces	K Ground Floor Retail: 19,800 SF Residential Units: 117 Parking Required: 214 spaces Parking Provided: 216 spaces	

be easily identified and convenient to multiple users. Unless a parking management program is implemented, it will remain unclear where and when public parking is available in the District. In addition,

without proper enforcement of on-street parking, drivers will continue to use curb spaces to park all day creating the sense that there is not enough parking available.

Table 4: Proposed Redevelopment: Required Parking Summary

Redevelopment Scenario	Proposed Parking	Existing Parking	Surplus/ Deficiency (-)
Montcastle Park	1260	1880	620
Cumberland Avenue Corridor	2290	2700	410
Totals	3550	4580	1030

Chapter 4: Parking Management Strategies—An Overview of Options

Historically, solving a parking problem meant increasing the supply. Unfortunately, repeatedly increasing parking supply encourages more auto use. With the implementation of the Cumberland Avenue Corridor Plan, it is evident that a parking district that caters to single-purpose reserved parking is unsupportive of the City's goal of creating a mixed-use, pedestrian-friendly environment.

While providing adequate parking is important, it is only one tool available to manage both parking supply and demand. The goal of parking management is to provide the optimal amount of parking, in key locations, to meet parking needs while reducing congestion and accommodating new development. The parking management program outlined in Chapter 5 will assist in the creation of a park-once environment that will enable people to conveniently park and access a variety of services in pedestrian-friendly environments that encourage shared parking.

In summary, a parking management program is better than expanding supply because it can support more strategic planning objectives such as:

- ♦ Reduction of development costs,
- ♦ Development of a compact, multi-modal district,
- ♦ Encouragement of the use of transit and bicycles, and
- ♦ Reduction in impervious surfaces¹⁰.

¹⁰Todd Litman (2006), *Parking Management Best Practices*, Planners Press

Potential parking management strategies that may be suitable for the Cumberland Avenue District are described below:

1. Require or allow public parking in lieu of private parking—developers fund public parking facilities through a fee in lieu of providing private facilities serving a single destination. Can be mandated or optional. The benefits include:
 - ♦ Provides developers with flexibility.
 - ♦ Allows shared use among different sites with different peak demands.
 - ♦ Allows customers to park once—reduces vehicle traffic and increases foot traffic.
 - ♦ Addresses historic preservation concerns—parking requirements can discourage the adaptive reuse of historic buildings if the new use makes providing on-site parking too difficult.
 - ♦ Consolidates scattered parking spaces and lots.
 - ♦ Requires fewer variances.
 - ♦ Encourages better urban design—parking requirements typically result in surface lots (allows continuous storefronts without these “dead” gaps).
 - ♦ Allows the City to bank land for additional parking supply and/or parking management programs, if desired.
2. Create public parking facilities—with or without an in lieu fee.
 - ♦ Public parking, including on-street and

municipal off-street serves multiple destinations, provides additional revenue, and is more efficient use of land.

3. Institute a special parking assessment through the establishment of a Parking Benefit District (see item 4 below), a Business Improvement District or other entity.
 - ♦ Businesses in the area are assessed a special assessment or tax to fund parking facilities in their area, as an alternative to each business supplying and maintaining their own parking.
4. Form a Parking Benefit District—Sharing parking revenue and building a constituency for paid parking is one of the best practices being discussed and promoted around the country. It is often referred to as a “Parking Benefit District.” This is a program through which the city returns all or a portion of the parking revenue generated through meters or non-resident passes in an area to an entity representing the district for extra maintenance, security, beautification projects, etc. The parking benefit district concept can be applied in both business districts and residential neighborhoods.

By designating an area within the Cumberland Avenue District and establishing a special transportation fund that would include revenue from on-street parking (either with pay stations on the periphery of the neighborhood or

with the traditional parking meters), revenue collected, less City expenses for maintenance and enforcement, could be applied toward improvements in the neighborhood that promote walking, cycling and transit use, such as sidewalks, curb ramps, and bicycle lanes.

- ✦ In addition, to encourage drivers to consider other ways to reach their destination without driving and parking in the neighborhood, parking meters can provide information on alternative ways for drivers to reach their destination.
- ✦ Charging for parking and promoting alternatives can help reduce the number of people parking in the neighborhood, but for those that do park and pay the meter, the neighborhood benefits.

5. Residential Parking Benefit District—The other way a parking benefit district can function is as a modification of a residential permit parking program. Rather than simply prohibiting non-residents from parking, non-residents can be allowed to pay to park in the resident permit district during business hours. The municipality can limit the number of non-resident permits issued based on the number of spaces that are usually available during the day. This is unlikely to be popular with residents unless they benefit from it in some way, which is where the parking benefit district idea comes in. If the revenue generated from non-residents paying fair market value for a parking permit is dedicated to fund improvement projects or additional public services in the district, residents will see

a value in allowing non-resident parking in a limited and financially beneficial way. Similar to a Commercial Parking Benefit District the city can:

- ✦ utilize the revenue to clean the neighborhood's streets and sidewalks more frequently,
- ✦ repair sidewalks,
- ✦ remove graffiti,
- ✦ plant trees, or
- ✦ add traffic calming features, etc.

Residents benefit from the improved services, non-residents are offered more parking options, and the city may be able to alleviate a parking problem or forgo adding additional parking lots or structures. Neighborhoods where spillover problems are the worst would stand to gain the most.

It is important to note that both commercial and residential parking benefit districts can be adopted incrementally, one block or street at a time, at the request of the business owners or residents. When neighboring blocks and streets see the results, they may decide to ask for the program as well.

6. Establish parking regulations—These control which vehicles may park at a particular location when and for how long. Common regulations include:

- ✦ User or vehicle type
- ✦ Duration
- ✦ Time period restrictions
- ✦ Residential parking permits

7. Implement walking & cycling improvements – expands the range and feasibility of shared parking facilities being utilized. Improving walkability increases park-once trips (parking in one location and walking rather than driving to other destinations), which reduces the amount of parking required at each destination.

8. Provide convenient and accurate information on parking and availability.

9. Develop a wayfinding system—Evaluate the existing Cumberland Avenue District public signage and then design a new wayfinding system. Wayfinding is defined as “signs, maps, and other graphic or audible methods used to convey location and directions to travelers.” As the Cumberland Avenue District changes and expands, it is important to keep in mind how visitors are directed to their destinations, whether they arrive on foot, by transit or by car.

10. Improve enforcement—Parking regulations and pricing need to be enforced consistently

“Curb parking revenue is public land rent.”
– Donald Shoup

11. Address spillover problems—Concerns about spillover impacts are often used to justify excessive parking requirements and opposition to other parking management solutions. Potential ways to address these concerns include using permit programs, enforcing time limits and/or establishing a Residential Benefit District.

For parking permits, the neighborhoods should be allowed to decide how many non-resident permits should be issued, preferably with the knowledge of how many spaces are typically available during the day. The hours of the non-resident permit validity can be set so that these vehicles must be gone by the time most people in the neighborhood return from work and look for parking. This type of program is most appropriate for areas that have some parking availability during the day and a nearby employment area or transit station generating demand for parking¹¹.

12. Establish a “car-share service” — This is a mobility enhancement service that provides an integrated citywide network of neighborhood-based motor vehicles available to members by reservation on an hourly basis, or in smaller intervals, and at variable rates. Car sharing is designed to complement existing transit and bicycle transportation systems by providing a practical alternative to private motor vehicle ownership, with the goal of reducing over-dependency on individually owned motor vehicles. Cities that have implemented car-sharing programs include, Ann Arbor, MI; Madison, WI; Berkeley, CA; Chapel Hill, NC; and Austin, TX.



¹¹Parking Spaces /Community Places Finding the Balance through Smart Growth Solutions. EPA. 231-K-06-001. January 2006

Chapter 5: Parking Management Implementation

A comprehensive parking management plan is a key component to managing congestion and reducing the impacts of auto traffic on multi-modal corridors such as Cumberland Avenue. The goal of developing a parking program is to manage parking supply and demand, ensuring that the redevelopment of the corridor does not negatively impact the adjacent neighborhoods, and secondarily, ensuring that parking revenue is generated for area improvements. Combined with strategies promoting alternative transportation modes such as bicycling, walking and transit, a parking plan is a critical component to managing parking.

In order to effectively implement a parking management program, it is recommended that the City develop an integrated parking plan using a combination of parking management and transportation demand management (TDM) strategies that can be phased in over a 10-year timeframe:

- Immediate actions (within one year)
- Short-term actions (within one–three years)
- Medium-term actions (within three–seven years)
- Long-term actions (within the next 10 years)

All of the following recommendations have been successfully implemented in other communities. Please refer to the Appendix D: A Peer Review for more information.

Immediate Actions (within one year)

Recommendation 1.1

Investigate the establishment of a Transportation and Parking Management District whose staff person would manage on-street and off-street parking in the City in consultation with an advisory board, merchants, property owners and residents.

Recommendation 1.2

Develop a strategy to improve enforcement of on-street parking. Parking regulations and pricing need to be enforced consistently in order to encourage turnover. New parking meters will need to be installed and additional police officers or staff may need to be employed to check meters.

Recommendation 1.3

Implement a multi-modal transportation and parking wayfinding system, in consultation with the hospitals and the University. A wayfinding system would include information on parking location, major destinations, and pricing. This could be combined with a branding program for the Cumberland Avenue District.

Recommendation 1.4

Develop a Cumberland Avenue Transportation Fund to be invested in transportation and streetscape improvements, including transit improvements and pedestrian enhancements, as well as future parking needs. (This fund would

eventually be enveloped into the Commercial Parking Benefit District, see Recommendation 2.3.)

Recommendation 1.5

Require as a condition of approval for new development that all non-residential parking be made available for public parking when not needed for its primary commercial use.

Recommendation 1.6

Require as a condition of approval for new development that all non-residential parking be shared among other uses (as demand patterns permit).

Recommendation 1.7

Prevent spillover parking in the Fort Sanders neighborhood by creating a Residential Parking Benefit District, where residents can park on-street for free or at low annual permit costs but non-residents or residents with more than one vehicle pay to park and the resulting revenue is invested in the neighborhood. Temporary visitor parking permits can be made available.

TDM Strategies:

- 1.1a Revise development standards to include bicycle parking facility requirements as part of all new developments, major renovations, where feasible, or establishment of new businesses within the District.

- 1.2a Establish a strategy in consultation with KAT, the hospitals and the University to provide additional transit service within the District (especially between major destinations and parking locations).

Short-Term Actions (within one-three years)

Recommendation 2.1

Create a “park-once” district within the Cumberland Avenue Study area by managing all public parking as an integrated system.

Recommendation 2.2

Remove existing parking meters within the Cumberland Avenue Study Area and install automated parking kiosks that would eliminate the need for each parking spot to be metered.

Recommendation 2.3

Form a Commercial Parking Benefit District, or a Business Improvement District, that dedicates revenues to landscaping, trash receptacles and collection, street cleaning, pedestrian lighting, transit and bicycle infrastructure and management of area-wide transportation amenities and infrastructure. This District would be managed under the City’s overarching Transportation and Parking Management District described under Recommendation 1.2.

Recommendation 2.4

Determine where future parking supply should go in consultation with the hospitals and the University, reserve potential locations and begin planning for a new shared structure.

Recommendation 2.5

Establish a fee in-lieu program such as a Parking Credit Program that would allow developers and business owners to pay into a fund rather than provide parking on site. This program would also allow for the unbundling of parking costs from the cost of new residential units.

TDM Strategies:

- 2.1a Create a Cumberland Avenue transit pass that provides bulk discounts for employees and residents of the district.
- 2.2a Request employers within the District to provide transit passes to all employees.
- 2.3a Work with Knoxville Area Transit to increase the frequency of transit service in the Cumberland Avenue District.

Medium-Term Actions (within three-seven years)

Recommendation 3.1

Adjust parking rates, hours, and time limits as needed to achieve 85 percent occupancy rates for on-street parking.

Recommendation 3.2

Require all major employers to provide parking “cash out.” A parking cash out is an option made available to commuters to choose cash in lieu of any parking subsidy offered. This is often beneficial to employers who lease parking on behalf of their employees.

TDM Strategies:

- 3.1a The City should encourage establishment of a car-sharing service with one or more of the cars located in the Cumberland Avenue District by converting part of the City fleet to a car-sharing program and/or subsidizing initial operations of the car-sharing provider.

Long-Term Actions (within 10 years)

Recommendation 4.1

Use net revenues from the Commercial Parking Benefit District (if established) to pay for long-term demand management, incentives and street improvements such as universal transit passes for all residents and employees within the district and a visible car-sharing pod.

Recommendation 4.2

Construct additional parking supply when peak parking demand exceeds 80 percent in the District.

Recommendation 4.3

Once parking resources are shared to meet demand and future supply needs are funded, remove all minimum parking requirements in the district.

TDM Strategies:

- 4.1a Use a portion of the net revenues to improve transit service within the District.
- 4.2a Monitor the effectiveness of TDM strategies and implement new measures as needed.

Appendices

Appendix A: Additional References and Resources

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Appendix B: Related Studies

Traffic Safety Plan for Fort Sanders Neighborhood City of Knoxville Traffic Engineering Division (October 2004)

This study investigated right-angle crashes in the Fort Sanders Neighborhood, and developed a plan to reduce the number of accidents. The proposed plan would create additional all-way stops, as well as removing or relocating parking to improve visibility. The intention is to add parking in the neighborhood while simultaneously reducing accidents by removing visual obstructions.

Cumberland Avenue Traffic Signal Basic Inventory Report URS (November 2006)

As part of the Cumberland Avenue Corridor Plan, traffic signal timing optimization was performed. Each intersection was reviewed from Poplar Drive and Cumberland to South Concord Street and Cumberland and south on Neyland Drive to Joe Johnson Drive. The report contains an analysis and recommendations for all 18 intersections.

Cumberland Avenue Corridor Plan Glatting Jackson Kercher Anglin, Inc. (April 2007)

The purpose of the plan is to create a more attractive, economically successful and safe environment along Cumberland Avenue. This plan, adopted in April 2007 by the Knoxville-Knox County Metropolitan Planning Commission and the Knoxville City Council, would encourage a safer environment for the thousands of pedestrians who use the corridor day and night. The plan will reduce the number of lanes from four lanes to three lanes. It will provide wider sidewalks and create a more bicycle- and transit-friendly environment. In addition, the plan will add additional housing and commercial developments. The redevelopment plan could potentially encourage more than \$280 million in new private investment.

Fort Sanders Regional Medical Center Traffic Study Wilbur Smith Associates (February 2008)

This study addresses the impact of closing 19th Street between Clinch Avenue and Laurel Avenue to accommodate a new building for the hospital. The addition would provide a direct connection among all the buildings and provide a more centralized entrance to the hospital from all parking areas. The study concentrates on the effects of the closure as well as possible alternate routes needed to counterbalance the closing of the north and southbound lanes between Laurel and Clinch

Avenues. Alternate routes suggested include 18th, 20th, and 21st Streets. The study suggests that closing 19th Street will improve pedestrian safety to and from the hospital and that the lane closures will not create an unmanageable burden on the street system.

Fort Sanders Regional Medical Center Parking Study Wilbur Smith Associates (February 2008)

The Fort Sanders Regional Medical Center Parking Study addresses the impact the proposed new building will have on the current Fort Sanders parking system. The proposed construction would displace two parking lots, provide two new structured levels of parking, and generate additional parking demand. To provide for the deficit created by the displacement of two parking lots, the proposed construction would require one structured parking facility with two levels at 150 spaces per level, and one structure with four parking garage levels at 150 spaces per level.

Appendix C: Parking Management Best Practices: Peer Review

Following are examples of where some of the parking management best practices recommended have been implemented, along with a source for further information on most.

Park Once

Santa Monica, CA

The downtown plan seeks a “Park Once -Pedestrian First” approach which emphasizes prominent identification of parking entrances so that visitors park at the first available parking facility. New commercial development pays into a shared parking fund and is not required to provide separate parking. An active street frontage is essential to encourage walking, which calls for ground-floor retail fronting the structures to minimize “dead space” and conceal parking facilities to improve street level views.¹

Monrovia, CA

The City of Monrovia located a 12-screen, 2,400-seat movie theater in the middle of Monrovia’s Old Town without providing the usual adjacent parking structure. Monrovia’s Old Town business district is compact (six blocks long and two wide) and abutted by residential neighborhoods on three sides. Medium- and high-density housing (mainly for senior citizens) had been developed immediately adjacent to the commercial properties. Two transit

agencies provide bus service to the edges of Old Town, and Monrovia has an active dial-a-ride service providing door-to-door public transportation.

Old Town was redeveloped in the 1970s as a pedestrian-friendly “main street” shopping and service district. Free public parking lots and street parking combined to provide more than 1,200 spaces scattered throughout the district that were never more than 80 percent filled. For several years, a Friday night Family Festival street fair—running weekly from March through Christmas—drew as many as 8,000 people on a typical summer night with very little overflow parking into residential neighborhoods. Additionally, most of the businesses using public parking for their employees closed at 5 p.m. and few stores stayed open past 7 p.m., meaning that a shared parking plan seemed feasible, which meant daytime use for office workers and nighttime use for theater goers.

The theater was to go up on one of the public parking lots, so those spaces were replaced by the expansion of another City-owned lot and the re-configuration of a side street adjacent to both that lot and the theater site. When the theater opened, there were more spaces than before the project began. In its first six months of operation, the theater has attracted good crowds and the parking has yet to be a problem. Lot and street parking is sufficient to handle the demand and convenient enough so movie-goers will walk two to three blocks between their cars and the

theater to stroll past shops and restaurants. The shared-parking plan has worked well in the project’s early stages. The second phase of their plan is about to begin. Theater crowds are drawing a new business mix to the district and more nighttime business uses are anticipated to develop over the next year. An assessment district is now in the works to finance more Old Town parking—either a structure or an additional street-level lot—to handle the expected increase in demand.²

Chattanooga, TN

To encourage urban development in downtown Chattanooga while limiting congestion and air pollution, the Chattanooga Area Regional Transit Authority (CARTA) developed a strategy to provide peripheral parking and a free shuttle service. The system is designed for the city’s linear central business district and allows workers and visitors to drive to the City, park in one of the two peripheral garages, and use the shuttles to travel up and down the 15-block business corridor. By constructing parking at either end of the business district, CARTA intercepts commuters and visitors before they drive into and through the city center, reducing traffic congestion. The two parking garages, Shuttle Park South (550 spaces) and Shuttle Park North (650 spaces), are owned by CARTA and operated privately. The free shuttle buses are financed through the garages’ parking revenues. They depart from each garage every five minutes all day, every day, and pass within walking distance of most downtown destinations. The electric-

¹Muller, J (2004) “Piecing Together City’s Parking Puzzle”, Santa Monica Daily Press, 31 July 2004.

²<http://www.vtpti.org/tdm/tdm89.htm>

powered shuttles transport approximately one million riders each year, making shuttle-served property attractive to businesses. Since 1992, when the shuttle service began, more than \$400 million have been spent on development in Chattanooga, including the successful aquarium, more than 100 retail shops and more than 60 restaurants. CARTA's initiatives won commendation from EPA, receiving a "Way to Go" award in 1996 for innovative transportation solutions that support urban development.³

In-Lieu Fees

Pasadena, CA

The City's "Parking Credit Program" allows property owners in Old Pasadena to pay a small fee in lieu of satisfying minimum parking requirements on-site. The fee is annual, rather than the lump sum common for similar fees in many other cities, allowing developers to avoid financing problems. (On the downside, this has created some revenue collection issues, particularly where property has changed owners.) The fee is set at an extremely low rate (\$127 per year per space in 2004).

The in-lieu fee revenue has helped to fund two public parking structures, which total 1,567 spaces, and provided a public contribution to a private structure

that is open to the public. (One space has been built for every 1.5 parking credits awarded; fewer spaces are required since the spaces are shared between different uses.) These in-lieu fees provide only a small portion (5 percent) of the funding needed to build and operate the garages, but they do provide the link between the waiver in minimum parking requirements, and the provision of public parking.⁴

Parking Payment Options

Sacramento, CA

The City of Sacramento has installed more than 300 Pay & Display Stations in downtown and midtown. A Pay & Display Station is an automated kiosk that replaces multiple meters on a block. The station accepts credit cards and coins, and it provides users with printed receipts to be displayed on the streetside window. These stations require far less maintenance than regular meters, increase revenue, improve the parking turnover rates and offer greater convenience. The stations cost less to operate because they run on solar power and need fewer field calls for repairs and coin collection. The kiosks cost approximately \$6,000 to \$7,000 each. They replace five to six regular parking meters and have an average life span of 10 years.⁵ A regular parking meter costs approximately \$650.⁶

Aspen, CO

The City of Aspen provides several parking payment options in downtown areas, including tokens, pre-paid "smart cards," and pre-paid in-car meters.

Vancouver, British Columbia

All City of Vancouver parking meters accept payment by mobile phone as an alternative to paying at the meter with coins.

Washington, DC

Beginning April 2007, Washington Metropolitan Area Transit Authority is piloting credit card/smart card payment options for parking at six Metrorail stations. Each facility will have one exit lane that accepts credit card or "SmarTrip" card payments⁷.

Wayfinding

Ann Arbor, MI

In 2006, the Downtown Development Authority undertook a comprehensive wayfinding program for the downtown and the adjacent districts, including the University of Michigan. The goal of the wayfinding program is to develop a signage system that will help drivers, pedestrians and cyclists navigate the downtown districts, key points of interest and parking locations. Each district has been given a distinct color scheme as part of the greater "branding" program.

San Jose, CA

Visitors will soon be able to receive information on the availability at city-owned downtown lots and garages by sending a text message from their cell phone. Users will get a response in minutes.⁸

Chicago, IL

Metra, the city's commuter rail provider, has installed a comprehensive system at its park-and-ride facilities that allows users to know not only the number of spaces available in the parking garage, but the number of available spaces at other station parking garages up and down the line. The dynamic message signs provide the available number of spaces at each lot, and static directional arrows direct the drivers to these lots.⁹

³Parking Spaces /Community Places Finding the Balance through Smart Growth Solutions. EPA. 231-K-06-001. January 2006.

⁴<http://www.ci.pasadena.ca.us/planning/deptorg/curplng/pkgcredit.asp>

⁵<http://www.cityofsacramento.org/transportation/parking/onstreetmeters.html>

⁶<http://www.portlandonline.com/shared/cfm/image.cfm?id=157993>

⁷http://www.wmata.com/about/MET_NEWS/PressReleaseDetail.cfm?ReleaseID=1586

⁸http://www.sjdowntownparking.com/text_msgs.php

⁹http://www.its.dot.gov/jpodocs/repts_te/14318_files/study_site_desc.htm

Parking Authority

Ann Arbor, MI

The Ann Arbor Downtown Development Authority (DDA) manages a wide variety of services that aim to improve the City's downtown. The DDA manages the City's Parking System, which includes six parking structures and four parking lots in the DDA area. Revenues are from lot parking permits, street meters, and parking meter covers. The City is in the process of transferring responsibilities to provide metered parking services to the DDA.

The DDA is governed by an all-volunteer 12-member board. State statute sets out how these positions must be filled. In addition, the DDA has four full-time staff members.¹⁰

Columbia, MO

The City of Columbia has four multi-level parking facilities supplying 1,179 parking spaces. In addition to these off-street facilities, the city has 15 additional off-street surface lots in the downtown business district with 912 spaces available. These offer a total of 2,091 off-street parking spaces; 490 of those off-street spaces are metered parking. Additionally, there are 1,697 meters on-street and 69 disabled access parking spaces scattered throughout the downtown business district.

¹⁰<http://www.a2dda.org/>

¹¹<http://www.gocolumbiamo.com/PublicWorks/Parking/#enforcement>

¹²http://www.boulderdowntown.com/about_us/bid#BID

¹³<https://www.ci.austin.tx.us/parkingdistrict/default.htm>

¹⁵Donald Shoup, *The High Cost of Free Parking* (2005), Planners Press, American Planning Association

The City's Parking Utility maintains all of these facilities, surface lots, and street meters. This includes preventive maintenance, repairs as necessary and daily housekeeping. The Utility also administers the sale of monthly or annual permits to a portion of those available parking spaces.¹¹

Boulder, CO

Boulder's Downtown Management Commission is responsible for parking construction and management. It operates a wide variety of demand management strategies such as parking assessments, parking regulations, marketing, and pedestrian improvements. The District analyzes the most cost-effective mix of new parking or transportation alternatives. They have found it is cheaper to provide free transit to all downtown employees than to provide them with parking. They also provide buying and negotiating strength for small businesses.¹²

Parking Benefit Districts

Austin, TX

A Parking Benefit District was created to help neighborhoods address spillover parking issues. The Districts are funded by metering the on-street parking (either with pay stations on the periphery of the neighborhood or with the traditional parking meters) and dedicating the revenue, less City expenses for maintenance and enforcement, toward improvements in the neighborhood that promote walking, cycling and transit use, such as sidewalks, curb ramps, and bicycle lanes. In addition, to encourage drivers to consider other ways to reach their destination without driving and parking in the neighborhood, parking meters provide information on alternative ways for drivers to reach their destination.

Charging for parking and promoting alternatives can help reduce the number of people parking in the neighborhood, but for those who do park and pay the meter, the neighborhood benefits.

The Parking Benefit District program was funded in part by a grant from the Mobile Source Outreach Assistance program of the Environmental Protection Agency (EPA), which selects public education and outreach projects that directly support local efforts to improve air quality from mobile sources.¹³

San Diego, CA

In San Diego, where parking meters were already in place, the city reached an agreement with Business Improvement Districts in the older commercial areas to return 45 percent of total parking meter revenue to parking meter districts. Although this money was previously going to the general fund, allowing districts to keep some of the money they generate through parking meters gives them an incentive to install additional meters, extend hours of operation, and raise rates (to the extent that those things help rather than hurt business), increasing total meter revenue. In addition, if business improves with better parking management and increased investment, the city will benefit from increased sales tax. Thus the revenue sharing agreement can mean a benefit for the whole city as well as the district.¹⁴

Pasadena, CA

In Pasadena, CA, two innovative parking policies have played a key role in revitalizing Old Pasadena, the historic downtown, which had become a run-down retail slum. One was implementing parking meters and returning revenues to the district, and the

other was allowing sites without off-street parking to pay a fee in lieu of providing required parking (as described above).

Before the district installed parking meters, employees parked in free curb spaces and moved their cars periodically to avoid the two-hour limit, so customers had trouble finding places to park. Despite fears of driving customers away, once the city agreed to return all meter revenue to the district, the businesses and property owners came to support the idea and agreed to the relatively high rate of \$1 per hour and to operating the meters on evenings and Sundays. The city and Old Pasadena Business Improvement District (BID) established a parking meter zone with the same boundaries as the BID.

When the parking meters were installed, the city borrowed money to pay for improvements, and used the meter revenue to pay off the debt. The bond proceeds paid for street furniture, trees, tree grates, and historic lighting fixtures throughout the area. Dilapidated alleys were turned into safe, functional pedestrian spaces with access to shops and restaurants.

In 2001, the meters generated \$1.3 million, \$1,867 per meter. The total capital and operating costs for collecting the revenue amounted to \$383 per meter. Including investment earnings and revenue from valet parking at meters, Old Pasadena collected a net revenue of \$1.2 million, or \$1,712 per meter. That

revenue goes toward paying the annual debt service on the money borrowed for improvements, increased public services in the district (some of which are provided by the city), and funding for BID activities such as added sidewalk and street maintenance and marketing. The district has been transformed into a busy and desirable shopping district.¹⁵

Shared Parking—project specific

Indianapolis, Indiana

Opened in September 1995, Circle Centre in Indianapolis's central business district offers retail and entertainment destinations. This development contains 630,600 square feet of retail space and 100,000 square feet of restaurant, specialty, and entertainment space, as well as a 2,700-seat cinema. One of the factors that led to the financial success of this \$300 million project was a shared parking arrangement that saved money and allowed a pedestrian-friendly design. Under generic minimum parking requirements, Circle Centre would have needed about 6,000 parking spaces. By using shared parking, the project was built with just 2,815 spaces. Shared parking for Circle Centre is used for both customers and employees. The mixed-use nature of the development project allows customers to use a single parking space for multiple destinations within the complex. Employees can use nearby off-site parking, particularly in evenings and on weekends when more than 12,000 nearby off-site spaces that normally serve downtown office workers become available. Taking these two shared parking components into account decreases the estimated need for on-site parking by more than 50 percent. This reduction in parking demand translates into

considerable cost savings. At parking costs of about \$10,000 per space for aboveground structured parking, development costs were reduced by about \$30 million. In addition, operating costs were reduced by approximately \$1 million per year.¹⁶

Car Sharing

Madison, WI

Community Car is a member-based carsharing service that provides cars by the hour for individuals and organizations. Members share access to a fleet of high gas-mileage and hybrid-electric vehicles located in reserved spots throughout the city. University of Washington faculty, staff and students receive special discounts and VIP parking.¹⁷

Berkeley, CA

City CarShare is a nonprofit whose mission is to provide convenient, affordable access to cars in order to improve the environment and the quality of life in Berkeley. Members share access to a fleet of cars and trucks located in reserved spots throughout the City. The City of Berkeley contracts with City CarShare to manage the majority of vehicles used for City purposes. These vehicles are then made available to the public after normal business hours.¹⁸

Other cities with car-sharing programs include but are not limited to the following:

- Chapel Hill, NC
- Chicago, IL
- Fort Wayne, IN
- Gainesville, FL
- Eugene, OR
- Austin, TX
- Ann Arbor, MI
- Atlanta, GA
- Aspen, CO
- Princeton, NJ
- Portland, OR

¹⁵Shoup.

¹⁶<http://www.indydt.com/parking.html>

¹⁷<http://www.communitycar.com/>

¹⁸<http://www.citycarshare.org/>

Appendix D: Cumberland Avenue Merchant Survey

In an effort to collect information on parking needs in the Cumberland Avenue study area, MPC distributed a survey in November 2007 to approximately 55 businesses. The survey asked questions regarding the nature of the business, who the business served, and questions specific to parking.¹ The survey had no statistical safeguards such as sampling errors and confidence levels but the data it contains should provide valuable information to the business community and policymakers.

Of the 55 businesses surveyed, 38 responded for a response rate of 69 percent. The average tenure of business surveyed within the study area is 20 years. Below is a summary of additional survey results.

The types of businesses responding were as follows:

- Restaurant/bar—37%
- Service—29%
- Retail—24%
- Financial—8%
- Other—2%

Customers typically arrive at businesses in the Cumberland Avenue district as follows:

- Personal vehicle—58%
- On foot—38%
- Bus/trolley—4%

¹Please note that answers to survey questions are based solely on merchant and property owner perceptions.

²58 percent of respondents responded to the question regarding whether or not they have a shared parking arrangement.

Survey respondents indicated that their businesses serve the following customers:

- UT students—37%
- Area residents (other than UT students)—27%
- Employees from area businesses—22%
- Tourists—8%
- Other—6%

Destinations most frequently mentioned as driving customer's to Cumberland Avenue include:

- Area restaurants
- UT campus and UT athletic games
- Fort Sanders Regional Medical Center and East Tennessee Children's Hospital

Parking

With a few exceptions, survey respondents have limited off-street parking for customers and their employees. It is estimated that there are approximately 780 off-street parking spaces available for the 38 businesses responding.

Of the 38 respondents, 41 percent of them currently have some type of shared parking arrangement. Of those respondents that answered the question of whether or not they would support a shared parking arrangement along Cumberland Avenue, 80 percent indicated that they would support such a policy.²

Thirty-three survey respondents answered the question of how many parking violators are towed from their parking lot on a monthly basis. Based

on their estimates, a total of approximately 55 violators are towed per month. UT students were identified as the most frequent violators. However, comments gathered in the survey and from talking to Cumberland Avenue merchants indicate that many merchants do not tow parking violators because they believe it has a negative impact on future business.

On average it costs approximately \$1,900 per year for respondents to maintain their off-street parking lots.

Deliveries

In general, respondents did not indicate that deliveries created a significant issue for their business. A few of the specific issues identified were as follows:

- Loading area frequently occupied by UT students.
- A lack of a designated loading zone creates a traffic issue.
- Alleys are not sufficiently utilized for deliveries.
- Delivery schedules conflict with adjacent businesses' delivery schedules.
- There is not place for drivers to park or turn around (on Lake Avenue).

TURNING SMALL CHANGE INTO BIG CHANGES

BY DOUGLAS KOLOZSVARI AND DONALD SHOUP

THE MONEY YOU PUT INTO a parking meter seems to vanish into thin air. No one knows where the money goes, and everyone would rather park free, so politicians find it easier to require ample off-street parking than to charge market prices at meters. But if each neighborhood could keep all the parking revenue it generates, a powerful new constituency would emerge—the neighborhoods that receive the revenue. Cities can change the politics of parking if they earmark parking revenue for public improvements in the metered neighborhoods.

Consider an older business district where few stores have off-street parking, and vacant curb spaces are hard to find. Cruising for curb parking congests the streets, and everyone complains about a parking shortage. Parking meters would create a few curb vacancies, and these vacancies would attract customers willing to pay for parking if they don't have to spend time hunting for it. Nevertheless, merchants fear that charging for parking would keep some customers away. Suppose in this case the city promises to use all the district's meter revenue to pay for public amenities that can attract customers, such as cleaning the sidewalks, planting street trees, putting overhead utility wires underground, improving store facades, and ensuring security. Using curb parking revenue to improve the metered area can therefore create a strong local interest in charging the right price for curb parking.

Douglas Kolozsvari received the MA in urban planning from UCLA in 2002 and is now associate planner at the San Mateo County Transit District (kolozsvariid@samtrans.com), and Donald Shoup is professor of urban planning at the University of California, Los Angeles (shoup@ucla.edu).



2

A C C E S S

The right price for curb parking is the lowest price that keeps a few spaces available to allow convenient access. If no curb spaces are available, reducing their price cannot attract more customers, just as reducing the price of anything else in short supply cannot increase its sales. A below-market price for curb parking simply leads to cruising and congestion. The goal of pricing is to produce a few vacant spaces so that drivers can find places to park near their destinations. Having a few parking spaces vacant is like having inventory in a store, and everyone understands that customers avoid stores that never have what they want in stock. The city should reduce the price of curb parking if there are too many vacancies (the inventory is excessive), and increase it if there are too few (the shelves are bare).

Underpricing curb parking cannot increase the number of cars parked at the curb because it cannot increase the number of spaces available. What underpricing can do, however, and what it *does* do, is create a parking shortage that keeps potential customers away. If it takes only five minutes to drive somewhere else, why spend fifteen cruising for parking? Short-term parkers are less sensitive to the price of parking than to the time it takes to find a vacant space. Therefore, charging enough to create a few curb vacancies can attract customers who would rather pay for parking than not be able to find it. And spending the meter revenue for public improvements can attract even more customers.

We can examine the effects of this charge-and-spend policy because Pasadena, California, charges market prices for curb parking and returns all of the meter revenue to the business districts that generate it. An evaluation of Pasadena's program shows it can help revitalize older business districts by improving their parking, transportation, and public infrastructure.

OLD PASADENA

Pasadena's downtown declined between 1930 and 1980, but it has since been revived as "Old Pasadena," one of Southern California's most popular shopping and entertainment destinations. Dedicating parking meter revenue to finance public improvements in the area has played a major part in this revival.

Old Pasadena was the original commercial core of the city, and in the early 20th century it was an elegant shopping district. In 1929, Pasadena widened its main thoroughfare, Colorado Boulevard, by 28 feet, and this required moving the building facades on each side of the street back 14 feet. Owners removed the front 14 feet of their buildings, and most constructed new facades in the popular Spanish Colonial Revival or Art Deco styles. However, a few owners put back the original facades (an early example of historic preservation). The result is a handsome circa-1929 streetscape that is now the center of Old Pasadena.

The area sank into decline during the Depression. After the war the narrow storefronts and lack of parking led many merchants to seek larger retail spaces in more modern surroundings. Old Pasadena became the city's Skid Row, and by the 1970s much of it was slated for redevelopment. Pasadena's Redevelopment Agency demolished ➤





three historic blocks on Colorado Boulevard to make way for Plaza Pasadena, an enclosed mall with ample free parking whose construction the city assisted with \$41 million in public subsidies. New buildings clad in then-fashionable black glass replaced other historic properties. The resulting “Corporate Pasadena” horrified many citizens, so the city reconsidered its plans for the area. The *Plan for Old Pasadena*, published in 1978, asserted “if the area can be revitalized, building on its special character, it will be unique to the region.” In 1983, Old Pasadena was listed in the National Register of Historic Places. However, despite these planning efforts, commercial revival was slow to come, in part because lack of public investment and the parking shortage were intractable obstacles.

PARKING METERS AND REVENUE RETURN

Pasadena devised a creative parking policy that has contributed greatly to Old Pasadena’s revival: it uses Old Pasadena’s parking meter revenue (\$1.2 million in 2001) to finance additional public spending in the area.

Old Pasadena had no parking meters until 1993, and curb parking was restricted only by a two-hour time limit. Customers had difficulty finding places to park because employees took up the most convenient curb spaces, and moved their cars every two hours to avoid citations. The city’s staff proposed installing meters to regulate curb parking, but the merchants and property owners opposed the idea. They feared that paid parking would discourage people from coming to the area at all. Customers and tenants, they assumed, would simply go to shopping centers like Plaza Pasadena that offered free parking. Meter proponents countered that employees rather than customers occupied many curb spaces, and making these spaces available for short-term parking would attract more customers. Any customers who left because they couldn’t park free would also make room for others who were willing to pay if they could find a space, and who would probably spend more money in Old Pasadena if they could find a space.

Debates about the meters dragged on for two years before the city reached a compromise with the merchants and property owners. To defuse opposition, the city offered to spend all the meter revenue on public investments in Old Pasadena. The merchants and property owners quickly agreed to the proposal because they would directly benefit from it. The city also liked it because it wanted to improve Old Pasadena, and the meter revenue would pay for the project.

The desire for public improvements that would attract customers to Old Pasadena soon outweighed fear that paid parking would drive customers away. Businesses and property owners began to see the parking meters in a new light—as a source of revenue. They agreed to an unusually high rate of \$1 an hour for curb parking, and to the unusual policy of operating the meters on Sundays and in the evenings when the area is still busy with visitors. The city also didn’t *lose* anything in the process. Because there had been no parking meters anywhere in the city before, returning the revenue to Old Pasadena didn’t create a loss to the city’s general fund. Indeed, the city gained revenue from overtime fines. Both business and government thus had a stake in the meter money, and so the project went ahead.

Only the blocks with parking meters receive the added services financed by the meter revenue. The city worked with Old Pasadena’s Business Improvement District (BID) to establish the boundaries of the Old Pasadena Parking Meter Zone (PMZ). The

city also established the Old Pasadena PMZ Advisory Board, consisting of business and property owners who recommend parking policies and set spending priorities for the zone's meter revenues. Connecting the meter revenue directly to added public services and keeping it under local control are largely responsible for the parking program's success. "The only reason meters went into Old Pasadena in the first place," said Marilyn Buchanan, chair of the Old Pasadena PMZ, "was because the city agreed all the money would stay in Old Pasadena."

The city installed the parking meters in 1993, and then borrowed \$5 million to finance the "Old Pasadena Streetscape and Alleyways Project," with the meter revenue dedicated to repaying the debt. The bond proceeds paid for street furniture, trees, tree grates, and historic lighting fixtures throughout the area. Dilapidated alleys became safe, functional pedestrian spaces with access to shops and restaurants. To reassure businesses and property owners that the meter revenues stayed in Old Pasadena, the city mounted a marketing campaign to tell shoppers what their meter money was funding.

As the area attracted more pedestrian traffic, the sidewalks needed more maintenance. This would have posed a problem when Old Pasadena relied on the city for cleaning and maintenance, but now the BID has meter money to pay for the added services. The BID has arranged for daily sweeping of the streets and sidewalks, trash collection, removal of decals from street fixtures, and steam cleaning of Colorado Boulevard's sidewalks twice a month. Dedicating the parking meter revenue to Old Pasadena has thus created a "virtuous cycle" of continuing improvements. The meter revenue pays for public improvements, the public improvements attract more visitors who pay for curb parking, and more meter revenue is then available to pay for more public improvements.

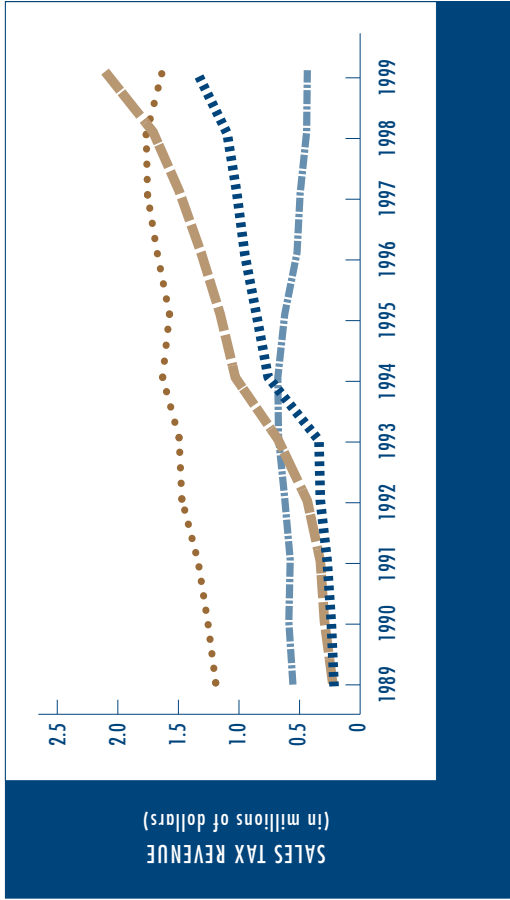
Old Pasadena's 690 parking meters yielded \$1.2 million *net* parking revenue (after all collection costs) to fund additional public services in FY 2001. The revenue thus amounts to \$1,712 per meter per year. The first claim on this revenue is the annual debt service of \$448,000 that goes to repay the \$5 million borrowed to improve the sidewalks and alleys. Of the remaining revenue, \$694,000 was spent to increase public services in Old Pasadena, above the level provided in other commercial areas. The city provides some of these services directly; for example, the Police Department provides additional foot patrols, and two horseback officers on weekend evenings, at a cost of \$248,000. The parking enforcement officers who monitor the meters until well into the night further increase security, at no additional charge. The city also allocated \$426,000 of meter revenue for added sidewalk and street maintenance and for marketing (maps, brochures, and advertisements in local newspapers). Drivers who park in Old Pasadena finance all these public services, at no cost to the businesses, property owners, or taxpayers.

Old Pasadena has done well in comparison with the rest of Pasadena. Its sales tax revenue increased rapidly after parking meters were installed in 1993, and is now higher than in the other retail districts in the city. Old Pasadena's sales tax revenues quickly exceeded those of Plaza Pasadena, the nearby shopping mall that had free parking. With great fanfare, Plaza Pasadena was demolished in 2001 to make way for a new development—with storefronts that resemble the ones in Old Pasadena.

Would Old Pasadena be better off today with dirty sidewalks, dilapidated alleys, no street trees or historic street lights, and less security, but with free curb parking? Clearly, no. Old Pasadena is now a place where everyone wants to be, rather than merely another place where everyone can park free. ➤



Pasadena retail sales-tax revenue



Westwood Village

A TALE OF TWO BUSINESS DISTRICTS' PARKING POLICIES

To see how parking policies affect urban outcomes, we can compare Old Pasadena with Westwood Village, a business district in Los Angeles that was once as popular as Old Pasadena is now. In 1980, anyone who predicted that Old Pasadena would soon become hip and Westwood would fade would have been judged insane. However, since then the Village has declined as Old Pasadena thrived. Why?

Except for their parking policies, Westwood Village and Old Pasadena are similar. Both are about the same size, both are historic areas, both have design review boards, and both have BIDS. Westwood Village also has a few advantages that Old Pasadena lacks. It is surrounded by extremely high-income neighborhoods (Bel Air, Holmby Hills, and Westwood) and is located between UCLA and the high-rise corridor of Wilshire Boulevard, which are both sources of many potential customers. Old Pasadena, by contrast, is surrounded by moderate-income housing and low-rise office buildings. Tellingly, although Westwood Village has about the same number of parking spaces as Old Pasadena, merchants typically blame a parking shortage for the Village's decline. In Old Pasadena, parking is no longer a big issue. A study in 2001 found that the average curb-space occupancy rate in Old Pasadena was 83 percent, which is about the ideal rate to assure available space for shoppers. The meter revenue has financed substantial public investment in sidewalk and alley improvements that attract visitors to the stores, restaurants, and movie theaters. Because all the meter revenue stays in Old Pasadena, the merchants and property owners understand that paid parking helps business.

In contrast, Westwood's curb parking is underpriced and overcrowded. A 1994 parking study found that the curb-space occupancy rate was 96 percent during peak hours, making it necessary for visitors to search for vacant spaces. The city nevertheless reduced



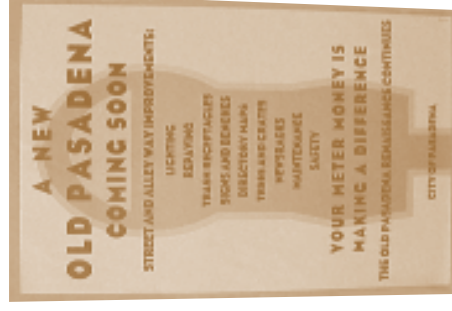
Westwood Village

meter rates from \$1 to 50¢ an hour in 1994, in response to merchants' and property owners' argument that cheaper curb parking would stimulate business. Off-street parking in any of the nineteen private lots or garages in Westwood costs at least \$2 for the first hour, so drivers have an incentive to hunt for cheaper curb parking. The result is a shortage of curb spaces, and underuse of the off-street ones. The 1994 study found that only 68 percent of the Village's 3,900 off-street parking spaces were occupied at the peak daytime hour (2 p.m.). Nevertheless, the shortage of curb spaces (which are only 14 percent of the total parking supply) creates the illusion of an overall parking shortage. In contrast to Old Pasadena, Westwood's sidewalks and alleys are crumbling because there is no source of revenue for repairing them—the meter revenue disappears into the city's general fund.

The Old Pasadena/Westwood Village comparison suggests that parking policies can help some areas rebound, and leave other areas trapped in a slump. If Westwood Village had always charged market prices for curb parking and had spent the revenue on public services, it probably would have retained its original luster rather than fallen into a long economic decline. If Old Pasadena had kept curb parking free and not spent \$1.2 million a year on public services, it probably would still be struggling. The exactly opposite parking policies in Westwood Village and Old Pasadena have surely helped determine their different fates. As the signs on Old Pasadena's parking meters say, "Your meter money makes a difference."

CONCLUSION

Charging market prices for curb parking and returning the meter revenue for public improvements have helped pave the way for Old Pasadena's renaissance. The meter revenue has paid to improve the streetscape and to convert alleys into pleasant walkways with shops and restaurants. The additional public spending makes the area safer, cleaner, and more attractive for both customers and businesses. These public improvements have increased private investment, property values, and sales tax revenues. Old Pasadena has pulled itself up by its parking meters. ♦



FURTHER READING

- Douglas Kolozsvari, *Parking: The Way to Revitalization. A Case Study on Innovative Parking Practices in Old Pasadena*. Comprehensive project submitted for the Master of Arts in Urban Planning, UCLA, 2002.
- Donald Shoup, "Cashing in on Curb Parking," *Access*, no. 4, Spring 1994, pp. 20–26.
- Donald Shoup, "An Opportunity to Reduce Minimum Parking Requirements," *Journal of the American Planning Association*, vol. 61, no. 1, Winter 1995, pp. 14–28.
- Donald Shoup, "Buying Time at the Curb," in *The Half-Life of Policy Rationales: How New Technology Affects Old Policy Issues*, Fred Foldvary and Daniel Klein, eds. (New York: New York University Press, 2003).
- Donald Shoup, "The Ideal Source of Local Public Revenue," *Regional Science and Urban Economics*, forthcoming.
- Donald Shoup, *The High Cost of Free Parking*. (Chicago: The Planners Press of the American Planning Association, forthcoming.)

The Price Of Parking On Great Streets

Donald Shoup

How can curb parking contribute to a great street? To help create great streets, a city should (1) charge performance-based prices for curb parking, and (2) return the revenue to the metered districts to pay for added public services. With these two policies, curb parking will help to create great streets, improve transportation, and increase the economic vitality of cities.

Performance-based parking prices

Performance-based prices will balance the varying demand for parking with the fixed supply of spaces. We can call this balance between demand and supply the Goldilocks principle of performance-based parking prices: the price is too high if many spaces are vacant, and too low if no spaces are vacant. When a few vacant spaces are available everywhere, the prices are just right. If prices are adjusted to yield one or two vacant spaces in every block (about 85 percent occupancy), everyone will see that curb parking is readily available. In addition, no one can say that performance-based parking prices will drive customers away if most curb spaces are occupied all the time.

Prices that produce an occupancy rate of about 85 percent can be called performance-based for three reasons. First, curb parking will perform efficiently. Most spaces will be occupied, but drivers will always be able to find a vacant space. Second, the transportation system will perform efficiently. Cruising for curb parking will not congest traffic, waste fuel, and pollute the air. Third, the economy

will perform efficiently. The price of parking will be higher when demand is higher, and this higher price will encourage rapid parking turnover. Drivers will park, buy something, and leave quickly so that other drivers can use the spaces. For parking, transportation, and economic efficiency, cities should set prices to yield about an 85 percent occupancy rate.

Local revenue return

Performance-based prices for curb parking can yield ample public revenue. If the city returns this revenue to pay for added public spending on the metered streets, residents and local merchants will support the performance-based prices. The added funds can pay to clean and maintain the sidewalks, plant trees, improve lighting, bury overhead utility wires, remove graffiti, and provide other public improvements.

Put yourself in the shoes of a merchant in an older business district where curb parking is free and customers complain about a parking shortage. Suppose the city installs meters and charges prices that produce a few vacancies. Everyone who wants to shop in the district can park quickly, and the meter money is spent to clean the sidewalks and provide security. These added public services make the business district a place where people want to be, rather than merely a place where anyone can park free if they can find a space. Returning the meter revenue generated by the district to the district for the district can convince merchants and property owners to support the idea of performance-based prices for curb parking.

Suppose also that curb parking remains underpriced in other business districts. Everyone complains about the shortage of parking in these districts, and cars searching for curb parking congest traffic. No meter revenue is available to clean the sidewalks and provide other amenities. In which district would you want to have a business?

Performance-based prices will improve curb parking by creating a few vacancies, the added meter revenue will pay to improve public services, and these added public services will create political support for performance-based prices.

Parking increment finance

Most cities put their parking meter revenue into the city's general fund. How can a city return performance-based meter revenue to business districts without shortchanging the general fund? The city can return only the subsequent increment in meter revenue -- the amount above and beyond the existing meter revenue -- that arises after the city begins to charge performance-based prices. We can call this arrangement parking increment finance.

Parking increment finance closely resembles tax increment finance, a popular way to pay for public investment in older districts. Local redevelopment agencies receive the increment in property tax revenue that results from the increased property values in the redevelopment districts. Similarly, business districts can receive the increment in parking meter revenue that results from

performance-based parking prices. More meters, higher rates, and longer hours of operation will provide money to pay for added public services. These added public services will promote businesses activity in the district, and the increased demand for parking will further increase meter revenue.

Citation revenue sharing

If curb parking is priced to make spaces available, the meters must be enforced. To increase local support for enforcement, the city can share with neighborhoods the revenue from parking citations. Citation revenue can, for example, pay to repair and maintain the sidewalks on metered streets. Instead of opposing enforcement, merchants and residents will see illegally parked cars as citation opportunities, and begin to support enforcement. The city will manage parking more effectively, and the neighborhood will receive more revenue to make its streets clean and safe.

By extension, the city can share the revenue from red-light cameras with neighborhoods. Because the city wants to reduce vehicle accidents and increase pedestrian safety, it can offer to install red-light cameras at appropriate intersections and spend the citation revenue to repair and maintain the nearby sidewalks. The cameras will encourage motorists to drive more carefully, and the few who do run red lights will pay to improve pedestrian safety. Except for those who run red lights, everyone will win.

Pilot program

Cities can use a pilot program to test Goldilocks parking prices for curb parking, combined with local return of the meter revenue. Any business district

that wants a pilot program can request it. Because dirty and unsafe streets will never be great, the added parking meter revenue can initially pay for clean-and-safe programs. Many communities may value clean and safe streets more highly than free but overcrowded curb parking. Parking may not be free, but it will be convenient and worth paying for.

This Op-Ed was adapted and reprinted on <http://www.planetizen.com> from a speech delivered at the Urban Land Institute's Great Streets Symposium in Washington, DC, January 17-20, 2006.

Donald C. Shoup, FAICP is Professor of Urban Planning at the University of California-Los Angeles and is author of many books and papers on parking, including *The High Cost of Free Parking*, a Planetizen Top Book for 2005, which explains the theory and practice of parking management.

AN ORDINANCE TO AMEND CHATTANOOGA CITY CODE,
PART II, CHAPTER 24, BY ADDING SECTIONS 24-333
THROUGH 24-336 RELATIVE TO PARKING.

SECTION 1. BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, TENNESSEE, That Chattanooga City Code, Part II, Chapter 24, be amended by adding the following new Sections 24-333 through 24-336 as follows:

Section 24-333. Establishment of Special Parking Management Districts.

(a) Notwithstanding the foregoing provisions of Section 24-316 through 24-332, special parking management districts are hereby established in the following streets:

(i) **North Shore Area:** including all of the following streets and locations:

Frazier Avenue, from its intersection with the eastern right-of-way of Market Street to the western right-of-way of Fehn Street.

Forest Avenue, from the north right-of-way of Frazier Avenue to the line identified by the south boundary of the lot located at 108 Forest Avenue.

Woodland Avenue, from the north right-of-way of Frazier Avenue to the line identified by the south boundary of the lot located at 118 Woodland Avenue.

River Street, from the western right-of-way of Fehn Street to the eastern right-of-way of Market Street/Market Street bridge.

Tampa Street, from the north right-of-way of River Street to the south right-of-way of Frazier Avenue.

(ii) **Riverfront District in Downtown Chattanooga:** including all of the following streets and locations:

Riverside Drive/Riverfront Parkway, from the north right-of-way line of South River Street to the north right-of-way line of East 2nd Street.

(b) These areas shall be referred to as Special Parking Management Districts, however they may be geographically defined or redefined from time to time.

Section 24-334. Establishment of Separate Rules and Regulations for Management of Parking Within Special Parking Management Districts.

(a) Within the Special Parking Management Districts as they are created or modified from time to time, and notwithstanding the provisions of Section 24-316 through 24-332 above, the City hereby establishes the following special rules and regulations for the management of on-street parking.

- (i) Streets and Locations Where Meters May be Placed. The streets and locations within each Special Parking Management District where meters may be placed shall be approved by the City Traffic Engineer.
- (ii) Days of Operation. Meters may be operated for on-street parking seven (7) days per week, but only during the hours set forth below.
- (iii) Hours of Operation. Meters may charge for public parking not earlier than 8:00 a.m. nor later than 10:00 p.m.
- (iv) Rates. Rates for individual on-street parking spaces shall not exceed \$1.00 per hour. Different rates may be established for different locations, provided that the rate shall not exceed the foregoing maximum. Lower rates may be established and used from time to time, and may be adjusted seasonally or for special events, as determined by the City or by any parking management entity designated by the City.
- (v) Use of Multi-Space Meters; Violations. The City may utilize parking meters covering more than one (1) space. Such meters shall, upon payment of appropriate consideration, issue a printed receipt for each vehicle owner, which shall be displayed prominently on the dashboard or interior windshield of the vehicle to indicate the amount of parking time purchased for that vehicle in the space where such vehicle is parked. Parking meters may utilize cash or coin or credit cards for receipt of payment. Failure to purchase parking time or failure to display the printed receipt face-up and viewable from the exterior of the vehicle shall be considered a violation of this ordinance.

Section 24-335. Delegation of Management Responsibilities to Chattanooga Area Regional Transportation Authority.

- (a) The City hereby designates the Chattanooga Area Regional Transportation Authority (“CARTA”) as its agent for management of on-street public parking within the North Shore and the Riverfront Special Parking Management District as defined in Section 24-333 above.
- (b) After July 1, 2007, the Mayor’s office shall have the authority to expand or create new Special Parking Management Districts by adding any or all of the “Parking Meter Zones” established in Section 24-505 to existing or newly-designated Special Parking Management Districts.
- (c) Though CARTA shall have the right and responsibility to manage parking within the Special Parking Management District, the City Traffic Engineer shall still have responsibility for designating which streets, and which areas within streets, may be utilized for on-street public parking, and CARTA shall not establish any new areas or change any existing parking areas without prior approval from the City Traffic Engineer.
- (d) Upon approval by the City Traffic Engineer of establishing parking in specified locations, CARTA shall, in consultation with the City Traffic Engineer, be responsible for selecting, installing, operating and maintaining all parking meters.
- (e) Within the Special Parking Management Districts, and subject to the limitations set forth in Section 24-334 above, CARTA may establish rules

regarding days and hours of operation for on-street meters; intervals of time available for metered parking; rates charged; placement of single-space or multi-space meters; and all other details regarding operation and management of on-street metered parking. Such rules may allow different rates, hours, parking intervals, and other variances and rules for different streets and for different locations within one street. Records for all rules established by CARTA shall be publicly available on CARTA's internet website, and shall be available for distribution upon request to CARTA.

(f) Within the Special Parking Management Districts, hours of operation for any specific street location as established by CARTA shall be subject to approval by the City Traffic Engineer as pertains to matters of traffic flow.

(g) All revenue collected from the operation of metered parking spaces within the Special Parking Management Districts, except for any fines, penalties, or other collections paid by any party on account of violation of parking rules and regulations, shall be retained by CARTA and utilized for CARTA's parking management operations, including the costs of acquiring and maintaining parking equipment and systems and enforcement of these ordinances, as well as the acquisition, construction, and maintenance of off-street parking facilities and the provision of passenger shuttle services in the downtown Chattanooga area. All revenues collected from fines, penalties, and other enforcement collections shall remain the property of the City. In the event there is any revenue left after paying for these costs by CARTA, such net revenue shall become a part of the General Fund of the City. The City reserves the right to request from CARTA any additional costs associated with the enforcement of metered parking spaces operated by CARTA.

(h) All revenues and expenses related to the operations of metered parking spaces within the Special Parking Management Districts shall be accounted for separately from other CARTA activities. CARTA shall submit annual reports to the City of the operations of the Special Management District or at other frequencies if requested by the City. The City or its agent shall have access to all accounts and records of all CARTA financial activities during normal business hours upon 24 hour request.

(i) Except for the special delegation of authority as set forth in this Section 24-333, all other provisions of Section 24-316 through 24-332 shall continue in full force and effect, and the City shall be responsible for enforcement of all public parking within the Special Parking Management District.

Section 24-336. Violation of Regulations and Enforcement Within Special Parking Management Districts; Commercial Parking Permits and Reservations Within Special Parking Management Districts.

(a) Notwithstanding the creation of the Special Parking Management Districts and the delegation of management thereof to CARTA, the responsibility for enforcement of regulations within such Districts shall remain with the City, and all provisions within Sections 24-322, 24-324, 24-328, and 24-329 regarding violation and enforcement shall continue to remain applicable within the Special Parking Management Districts.

- (b) Notwithstanding the creation of the Special Parking Management Districts and the delegation of management thereof to CARTA, the provisions of Section 24-330 through 24-332 regarding temporary commercial parking permits shall still be applicable within such Special Parking Management Districts.

SECTION 2. BE IT FURTHER ORDAINED, That this Ordinance shall take effect immediately after its passage.

PASSED on Second and Final Reading

____ March 6 _____, 2007. S/ _____ CHAIRPERSON

APPROVED: X DISAPPROVED: _____

DATE: _____ March 14 _____, 2007

S/ _____ MAYOR

/add

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
REDWOOD CITY AMENDING CHAPTER 20, ARTICLE VII OF
THE REDWOOD CITY MUNICIPAL CODE BY AMENDING
SECTIONS 20.96 THROUGH 20.96.21 IN THEIR ENTIRETY
AND DIVISIONS 4, 5 AND 9 IN THEIR ENTIRETY**

RECITALS

Whereas, planned new development in Downtown Redwood City is likely to increase traffic and parking demand. (*Downtown Mixed Use Retail/Cinema Project Environmental Report, 2000*); and

Whereas, the City has conducted a substantive review of the literature and the practices of other cities to determine the most effective ways of managing the traffic and parking demand; and

Whereas, based on that review the City has determined that the most effective tool for managing on-street parking is a program of pricing the on-street public parking at a rate so as to achieve a fifteen percent (15%) vacancy rate in the parking spaces on each block. (See *Shoup, Donald. The High Cost of Free Parking, American Planning Association Planners Press. 2005*); and

Whereas, underpriced on-street parking causes “cruising,” which adds to traffic congestion. *Shoup, page 291*; and

Whereas, a vacancy rate of about 15% is necessary to avoid cruising-induced traffic, to facilitate easy ingress and egress, and to offer parking opportunities to as many different people as possible. *Shoup, page 297* ; and

Whereas, California Vehicle Code Section 22508 authorizes cities to establish parking meter zones and to fix the rate of fees for such zones; and

Whereas, parking meter rate ordinances “may ... justify a fee system intended and calculated to hasten the departure of parked vehicles in congested areas, as well as to defray the cost of installation and supervision.” *DeAryan v. City of San Diego, 75 CA2d 292, 296 (1946)*; and

Whereas, such parking meter rate ordinances are for the purpose of regulating traffic and the parking of vehicles in the public streets, not a tax for revenue purposes. *Id* at 293; and

Whereas, receipts from such parking meter rate ordinances “may be used not only in defraying the expenses of installation, operation and control of such parking space and parking meters, but also those incurred in the control of traffic which may affect or be affected by the parking of vehicles in the parking meter zones thus created, including those incurred in connection with painting lines and signs, maintaining mechanical traffic signals and other expenses of regulating traffic and enforcing traffic regulations with respect to all traffic which may affect or be affected by the parking of vehicles in parking meter zones.” *Id* at 296; and

Whereas, using parking meter rates to achieve a vacancy rate of about 15% negates the necessity for time restrictions on the use of parking spaces; and

Whereas, certain formerly unmetered off-street parking facilities must be metered in order to meet the demands of changing patterns of use of Downtown parking; and

Whereas, the parking permit program requires modifications in order to meet the demands of changing patterns of use of Downtown parking.

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF REDWOOD CITY THAT: [excerpf]

Sec. 20.120. PERIODIC ADJUSTMENT OF DOWNTOWN METER ZONE METER RATES:

Under the authority of California Vehicle Code section 22508, the City Council hereby adopts the following process for adjusting Downtown Meter Zone meter rates from time to time to manage the use and occupancy of the parking spaces for the public benefit in all parking areas within the Downtown Meter Zone.

- A. To accomplish the goal of managing the supply of parking and to make it reasonably available when and where needed, a target occupancy rate of eighty-five percent (85%) is hereby established.
- B. At least annually and not more frequently than quarterly, the Parking Manager shall survey the average occupancy for each parking area in the Downtown Meter Zone that has parking meters. Based on the survey results, the Parking Manager shall adjust the rates up or down in twenty-five cent (\$0.25) intervals to seek to achieve the target occupancy rate. The base parking meter rate, and any adjustments to that rate made pursuant to this ordinance, shall become effective upon the programming of the parking meter for that rate. A current schedule of meter rates shall be available at the City Clerk's office.
- C. The hourly meter rate shall not exceed one dollar and fifty cents (\$1.50) without the express approval of the City Council.
- D. This Section does not apply to the parking facilities described in Section 20.119 of this Division during the "peak hours."

Sec. 20.121. USE OF DOWNTOWN METER ZONE PARKING METER REVENUES:

Revenues generated from on-street and off-street parking within the Downtown Meter Zone boundaries shall be accounted for separately from other City funds and may be used only for the following purposes:

- A. All expenses of administration of the parking program
- B. All expenses of installation, operation and control of parking equipment and facilities within or designed to serve the Downtown Core Meter Zone
- C. All expenses for the control of traffic (including pedestrian and vehicle safety, comfort and convenience) which may affect or be affected by the parking of vehicles in the Downtown Core Meter Zone, including the enforcement of traffic regulations as to such traffic.
- D. Such other expenditures within or for the benefit of the Downtown Core Meter Zone as the City Council may, by resolution, determine to be legal and appropriate.

This ordinance shall take effect on February 1, 2006.



KNOXVILLE-KNOX COUNTY
M P C
METROPOLITAN
P L A N N I N G
C O M M I S S I O N
T E N N E S S E E
Suite 403 • City County Building
400 Main Street
Knoxville, Tennessee 37902
865 • 215 • 2500
FAX • 215 • 2068
www.knoxmpc.org

Cumberland Avenue
CORRIDOR PROJECT