The parking study area encompasses an area almost identical to the Downtown Development Tier. The Downtown Development Tier is comprised of the historic downtown core and support areas where intense development and pedestrian activity is encouraged.

The area covers the extent of the Downtown Master Plan within which development is intended to be transit and pedestrian-oriented in order to enhance the street level experience and provide a mixture of goods and services near transit.

While the study area is intended to encompass all business activity near downtown, a small number of primarily residential areas are found within the perimeter. These small pockets of residential use should show how any supply limitations impact adjacent neighborhoods.
PROJECT GOALS

1. **Restrictions**: Review current parking restrictions to determine whether restrictions are having the desired effect related to turnover and/or creating confusion among visitors. Evaluate parking policy for spaces in front of churches and governmental facilities.

2. **Supply and Demand**: Quantitatively assess the supply and demand of downtown public and private parking, identifying peak and low-demand periods of the day. Determine the need for additional parking or whether there is excess parking capacity.

3. **Ownership and Public Access**: Identify all non-city owned parking in Downtown Durham, its management company, prices, and availability of day or night parking.

4. **Multimodal Access and Wayfinding**: Evaluate pedestrian patterns from parking facilities to destinations. Consider public parking facilities for bike-share station locations. Review the current wayfinding system regarding the location and identification of public parking lots.

5. **User Satisfaction**: Provide and distribute a survey to Downtown Durham businesses and employees to explore their concerns relative to the current parking conditions. Conduct a series of interviews with stakeholders and community groups on parking issues.


7. **Future Impacts**: Assess the impact of future development on parking through a combination of forecasting future demand and future development.

8. **Supply Expansion**: If excess supply does not exist, cite suitable locations, the feasibility of construction, and any land acquisition required to add new facilities to the parking system.
PUBLICLY ACCESSIBLE OFF-STREET PARKING FACILITIES

DOWNTOWN DURHAM PARKING STUDY

LEGEND
- Study Area Boundary
- City Owned Publicly Accessible Off-Street Parking
- County Owned Publicly Accessible Off-Street Parking
- Privately Owned Publicly Accessible Off-Street Parking
WEEKDAY PARKING UTILIZATION

8 a.m. to 12 p.m.

4 p.m. to 8 p.m.

12 a.m. to 4 p.m.

- 0% to 30% Occupancy
- 30% to 60% Occupancy
- 60% to 80% Occupancy
- 80% to 90% Occupancy
- 90% to 100% Occupancy
- Greater than 100% Occupancy
- Restricted/No Data
- Publicly Accessible Facilities

DOWNTOWN DURHAM PARKING STUDY

YOUR COMMENTS
WEEKDAY PARKING UTILIZATION

All Surveyed Spaces

Publicly Available Spaces

Restricted Spaces

DOWNTOWN DURHAM PARKING STUDY
STAKEHOLDER CONCERNS

- Comprehensive transportation solutions
- There is a shortage of short-term parking
- Private parking is underutilized
- Safety issues surrounding garage facilities
- Shared parking should be encouraged
- Most employees do not live in the City
- Parking Policy should consider both short-term and long-term needs
- Parking program and planning should be inclusive
- Special Events have a major impact on City parking and need better overall management
- Bus parking is extremely limited
RECOMMENDED MANAGEMENT POLICIES

EMPHASIZE PRICING AS A PRIMARY MANAGEMENT TOOL

- Adopt availability as the primary performance measure
- Set performance targets
- Create tiered hourly base rates
- Use progressive rates
- Adjust pricing schedules
- Re-examine monthly permit fees
- Monitor performance

Potential Performance Targets

Potential Initial Rate Tier Zones
<table>
<thead>
<tr>
<th>RECOMMENDED MANAGEMENT POLICIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>REDEFINE PARKING REQUIREMENTS IN THE ZONING CODE</strong></td>
</tr>
<tr>
<td>Adjust parking maximum requirement not to exceed industry standards</td>
</tr>
<tr>
<td>Provide access benefits that go beyond the development site</td>
</tr>
<tr>
<td>Create an Access Management Requirement framework</td>
</tr>
<tr>
<td>Developers: Provide on-site mobility amenities and/or Provide Transportation Demand Management programs and/or Pay an impact fee</td>
</tr>
<tr>
<td><strong>ADJUST REGULATIONS</strong></td>
</tr>
<tr>
<td>Simplify by easing time limits</td>
</tr>
<tr>
<td>Provide a grace period</td>
</tr>
<tr>
<td>Coordinate with private facilities</td>
</tr>
<tr>
<td>Provide adequate and accessible ADA parking</td>
</tr>
<tr>
<td>Manage and enforce loading zones</td>
</tr>
<tr>
<td>Prepare for increased autonomous vehicle use</td>
</tr>
<tr>
<td><strong>REASSESS PERMIT PROGRAM AND LOCATIONS</strong></td>
</tr>
<tr>
<td>Relocate municipal employee permit-only facilities</td>
</tr>
<tr>
<td>Introduce an employee parking shuttle</td>
</tr>
<tr>
<td>Convert facilities to publicly accessible hourly parking</td>
</tr>
<tr>
<td>Consider conversion of all or a portion of under-utilized facilities to permitted use</td>
</tr>
</tbody>
</table>

**DOWNTOWN DURHAM PARKING STUDY**
## RECOMMENDED MANAGEMENT POLICIES

### EXPAND THE PARKING FACILITIES FUND
- Invest net revenue from fees, permits, and citations in parking-related improvements
- Gain support for tangible benefits for Downtown
- Multiple potential organizational structures for fund oversight

### MANAGE OPERATIONAL SERVICES
- Consider self-operation rather than a management contract
- Enable the City to have complete control over parking facilities and level of service
- Allow for greater collaboration on mobility and transportation issues
  - Take direct advantage of infrastructure and equipment

### IMPROVE SYSTEM REPORTING AND TRACKING
- Create systems and standards for regular parking data reporting
- Create systems for accounting for parking payments
  - Develop a technology implementation plan
  - Create a protocol for implementing demand-based pricing in coordination with reporting
  - Plan for an attendant to be present at peak times to assist customers
  - Develop and adhere to a maintenance plan
- Develop upgrade and investment plans for parking facilities including access areas

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**DOWNTOWN DURHAM PARKING STUDY**
RECOMMENDED OPERATIONAL PROCEDURES

CITY AND COUNTY EMPLOYEE PARKING SHUTTLE

Introduce new Park and Ride facilities
Can also be used for event management
Make better use of underutilized facilities outside of the Downtown

IMPROVE AND COORDINATE INFORMATION SYSTEMS

Clearly convey parking rates, regulations, and restrictions
Allow visitors to plan their trips ahead of time using a Parking and Access Map
Easily identifiable entrance and exit sign at parking facilities
Wayfinding signage for pedestrians after parking

Best Practice: Clear and Visible Parking Wayfinding

FACILITATE SHARED PARKING AGREEMENTS

Work with private lot owners to make additional facilities accessible to the public
Standardize lighting, signage, payment methods, physical improvements
Help to address common concerns such as revenue share and liability insurance
Use technology and information systems to incentivize the use of shared facilities

Best Practice: Clear and Visible Parking Wayfinding

DOWNTOWN DURHAM PARKING STUDY
RECOMMENDED OPERATIONAL PROCEDURES

CREATE A FACILITY MAINTENANCE PLAN

- Emphasize appearance, maintenance, safety, and security of public parking facilities
- Institute a maintenance and repair program
- Conduct a parking facility condition assessment
- Review and prioritize improvements
- Budget for and schedule repairs

INTRODUCE CONSISTENT BRANDING/MARKETING

- Treat parking facilities as marketable assets for Downtown
- Implement an integrated signage plan that creates identification and regulation signage matching the program brand
- Educate the public regarding parking management strategies and programs

PROVIDE A QUALITY PEDESTRIAN ENVIRONMENT

- Review and evaluate policies related to urban design principles for parking facilities
- Configure parking infrastructure to support Downtown’s strategic goals
- Assess pedestrian environmental quality within the parking study area
- Enhance physical safety through improved lighting and safer street crossings
- Create attractive pedestrian links in the form of transit and bicycle facility improvements

Example Pedestrian Environmental Quality Index Assessment

Unique Parking System Branding - Boise, Idaho

DOWNTOWN DURHAM PARKING STUDY
## RECOMMENDED OPERATIONAL POLICIES

### ADD ON-STREET PARKING
- Add short-term and drop-off spaces within the study area.
- Examine the potential to convert travel lanes into parking lanes while simultaneously addressing pedestrian safety and one-way circulation patterns.

### EXPLORE VALET PARKING OPTIONS
- Consider official valet operations to relieve demand pressure in unique locations.
  - Set station locations, rates, uniforms, and signage guidelines.
  - Allow valet operators to use designated areas in off-street facilities.

### MULTIMODAL OPTIONS AND OPPORTUNITIES
- Public transit improvements.
- Bicycle facility improvements.
- Pedestrian safety and access improvements.

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**DOWNTOWN DURHAM PARKING STUDY**
PARKING DEMAND MODELING

BASELINE DEMAND

Active land uses inventoried at the time of parking data collection (November 2017)

Weekday Modeled Parking Demand

The Weekday Modeled Parking Demand graph represents the number of parking spaces in demand for every land use, taking into consideration alternative transportation methods and captive market effect.

Modeled Peak Demand: 12106
Existing Parking Supply: 19768

Reserve and Excess Capacity
Weekday Modeled Parking Demand

Excess Existing Capacity
Recommended Reserve
Shared Demand Estimate

Weekend Modeled Parking Demand

The Weekend Modeled Parking Demand graph represents the number of parking spaces in demand for every land use, taking into consideration alternative transportation methods and captive market effect.

Modeled Peak Demand: 6814
Existing Parking Supply: 19768

Reserve and Excess Capacity
Weekend Modeled Parking Demand

Excess Existing Capacity
Recommended Reserve
Shared Demand Estimate

In a proven principle often referred to as “staggered peaks,” the actual demand for parking varies by use throughout the hours of a day: office space generates parking demand during business hours; parking for residential housing is highest overnight; and the demand generated by restaurants is highest during meal times and into the evening. If parking is shared between multiple uses, the aggregated parking demand by time of day is less than the total that would be provided separately for each use.

A second principle of shared parking in a mixed use area is often referred to as “internal capture,” whereby a single parking space that is used for one use at a single time may serve another use at the same time simply by the virtue of someone walking to a second destination after parking at their first destination.
PARKING DEMAND MODELING

GROWTH DEMAND

Adding development under construction at the time of parking data collection (November 2017)

Weekday Modeled Parking Demand

The weekday Modeled Parking Demand graph represents the number of parking spaces in demand for different land uses, taking into consideration alternative transportation methods and internal capture effect.

Reserve and Excess Capacity

Weekday Modeled Parking Demand

<table>
<thead>
<tr>
<th>Project Address</th>
<th>Project Name</th>
<th>Residential Units</th>
<th>Commercial Sq. Ft.</th>
<th>Other Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1105 W. Main Street</td>
<td>Solis Brightleaf</td>
<td>194</td>
<td></td>
<td></td>
</tr>
<tr>
<td>511 S. Mangum Street</td>
<td>Van Alen</td>
<td>418</td>
<td></td>
<td></td>
</tr>
<tr>
<td>555 S. Mangum Street</td>
<td>One City Center</td>
<td>17,686</td>
<td>211,769 SF Office</td>
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</tr>
<tr>
<td>110 N. Corcoran Street</td>
<td>District Court</td>
<td>139</td>
<td>22,828</td>
<td>130,195 SF Office</td>
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<tr>
<td>202 N. Corcoran Street</td>
<td>Unscripted Hotel</td>
<td>10,000</td>
<td>74 Hotel Rooms</td>
<td></td>
</tr>
<tr>
<td>300 N. Roxboro Street</td>
<td>Durham County Library</td>
<td></td>
<td>96,000 SF</td>
<td></td>
</tr>
<tr>
<td>602 E. Main Street</td>
<td>Durham Police</td>
<td>21,514</td>
<td>120,952 SF Office</td>
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<tr>
<td>200 Morris Street</td>
<td>Durham I.D.</td>
<td>14,958</td>
<td>149,152 SF Office</td>
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<tr>
<td>515 N. Mangum Street</td>
<td>Mangum Flats</td>
<td>22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>409 S. Roxboro Street</td>
<td>Mark at Durham One</td>
<td>305</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1,078</td>
<td>86,986</td>
<td>1,022,028 SF Office/</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Judicial/Library</td>
</tr>
</tbody>
</table>

Background Notes

In a proven principle often referred to as "staggered peaks," the actual demand for parking varies by use throughout the hours of a day: office space generates parking demand during business hours; parking for residential housing is highest overnight; and the demand generated by restaurants is highest during meal times and into the evening. If parking is shared between multiple uses, the aggregated parking demand by time of day is less than the total that would be provided separately for each use.

A second principle of shared parking in a mixed use area is often referred to as "internal capture," whereby a single parking space that is used for one use at a single time may serve another use at the same time simply by the virtue of someone walking to a second destination after parking at their first destination.
At the first Open House, participants were asked to indicate their level of support for the following potential initiatives:

- Performance-Based Pricing
- Event Parking Management
- Permit Parking
- Effective Information
- Multimodal Improvements
- On-Street Parking
- Payment Options
- Zoning
- Employee Parking Management

<table>
<thead>
<tr>
<th>Initiative</th>
<th>High Priority</th>
<th>Medium Priority</th>
<th>Lower Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Parking</td>
<td>12</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Effective Information</td>
<td>6</td>
<td>3</td>
<td>0</td>
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<tr>
<td>Zoning</td>
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<td>2</td>
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<tr>
<td>Multimodal Improvements</td>
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<tr>
<td>On-Street Parking Management</td>
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<tr>
<td>Management</td>
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<td>2</td>
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<tr>
<td>Event Parking Management</td>
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<td>1</td>
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<tr>
<td>Performance-Based Pricing</td>
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<td>0</td>
</tr>
<tr>
<td>Payment Options</td>
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<td>0</td>
</tr>
<tr>
<td>Permit Parking</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

1 = High Priority
2 = Medium Priority
3 = Lower Priority
## Action Plan Priority Assessment

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasize Pricing as a Primary Management Tool</td>
<td>$500</td>
</tr>
<tr>
<td>Adjust Regulations</td>
<td>$500</td>
</tr>
<tr>
<td>Reassess Permit Program and Locations</td>
<td>$500</td>
</tr>
<tr>
<td>Expand the Parking Facilities Fund</td>
<td>$500</td>
</tr>
<tr>
<td>Coordinated Event Management</td>
<td>$500</td>
</tr>
<tr>
<td>Add On-Street Parking</td>
<td>$500</td>
</tr>
<tr>
<td>Facilitate Shared Parking Agreements</td>
<td>$500</td>
</tr>
<tr>
<td>Redefine Parking Requirements in the Zoning Code</td>
<td>$500</td>
</tr>
</tbody>
</table>

You have $2,500 to use to implement some of the strategies you’ve seen today. Apply your $2,500 towards the strategies listed on both activity boards to help us determine the highest priority improvements for the Downtown Durham Parking Study.
**ACTION PLAN PRIORITY ASSESSMENT**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore Valet Parking Options ($500)</td>
<td></td>
</tr>
<tr>
<td>Improve and Coordinate Information Systems ($1000)</td>
<td></td>
</tr>
<tr>
<td>Improve System Reporting and Tracking ($1000)</td>
<td></td>
</tr>
<tr>
<td>Introduce Consistent Branding/Marketing ($1000)</td>
<td></td>
</tr>
<tr>
<td>Public Employee Parking Shuttle ($1000)</td>
<td></td>
</tr>
<tr>
<td>Assume Management of Operational Services ($1000)</td>
<td></td>
</tr>
<tr>
<td>Multimodal Options and Opportunities ($1500)</td>
<td></td>
</tr>
<tr>
<td>Create and Implement a Facility Maintenance Plan ($1500)</td>
<td></td>
</tr>
</tbody>
</table>

You have $2,500 to use to implement some of the strategies you’ve seen today. Apply your $2,500 towards the strategies listed on both activity boards to help us determine the highest priority improvements for the Downtown Durham Parking Study.

The cost of implementation of the various improvements is listed below each strategy. Spend your money wisely!
NEXT STEPS

FINAL PARKING IMPROVEMENT PLAN - SUMMER 2018

Compiling material from the Existing Parking Conditions and Needs Assessment, the Parking Needs and Recommendations Report, the Future Parking Demand Analysis, and public feedback into a final Downtown Durham Parking Improvement Plan.

The final plan will include an Action Plan which will help the City of Durham prioritize actions over the short, medium, and long term based on cost and feasibility.

DOWNTOWN DURHAM PARKING STUDY