Acknowledgements

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We would also like to acknowledge the many community members and public officials who lent their time and perspectives to this project. To the City of Ithaca officials, Cornell University officials, political figures, members of the University and Ithaca community, and local businesses who participated in this project: Your insights were invaluable in crafting this research. Thank you for your important contributions.
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I. Executive Summary

**Purpose Statement**
This parking study, prepared for the Ithaca City Planning Department, examines Collegetown’s existing parking system. The Ithaca City Planning Department commissioned the Cornell Institute for Public Affairs (CIPA) Domestic Capstone class to prepare an updated parking study originally conducted in 2000. This 2012 study aims to inventory and review the existing parking in Collegetown, and make recommendations regarding issues such as the development of future parking, and policies to guide the management and enforcement of existing parking.

**Project Methodology**
The 2012 Collegetown Parking Study was a process of quantifying and qualifying the parking needs in Collegetown to determine parking demand for the study area. The study area, as determined by the Ithaca City Planning Department, is illustrated in Map 1: 2012 Collegetown Parking Study Area. This area covers the same region investigated in the 2000 study, referred to as the Collegetown Parking Overlay Zone (CPOZ), but expands to include the North Belle Sherman neighborhood bordering the east side of the CPOZ. Collegetown consists of a combination of land uses including residential, retail, restaurants, and offices. Within the study area, the parking supply consists of on-street and off-street parking. The on-street parking supply is a combination of metered and unmetered spaces, as well as business loading zones. Meanwhile, the off-street parking supply is a combination of public and private surface lots, as well as the Dryden Garage.

The Fall 2012 CIPA Domestic Capstone class evaluated parking supply and usage within the study zone. To begin, the class of 20 Cornell University students was divided into four main teams, each studying a substantive parking issue. These were 1) parking inventory and usage, 2) residential surveys, 3) business surveys (owner and employee), and 4) stakeholder interviews. Data was collected through field work, usage studies, surveys, and a series of public and stakeholder meetings and interviews. Feedback was collected throughout the study from the project’s contact at the Ithaca City Planning Department, Megan Wilson.

**Methodology and Results: Parking Inventory and Usage**
The 2012 Collegetown Parking Inventory Study was divided into four areas of study: parking inventory, weekday and weekend usage, license plate survey, and a residential overflow study. This information was used to determine the on-street and off-street parking capacity. An inventory of parking was done in order to create an accurate count of on-street and private off-street parking spaces within the study zone. The usage survey was completed to determine how the current parking supply is being utilized. Much of the information gathered during the 2012 Collegetown Parking Inventory Study is consistent with the studies conducted in 2000 and July 2012. Notably, the study found that when parking was free, occupancy was generally near 85% (widely considered to be the ideal occupancy level for street parking). However, when parking meters were present and active (weekdays at metered spaces during the day), usage was well below this target. The Dryden Garage also experienced very low usage rates.

**Methodology and Results: Residential Surveys**
The residential survey collected information on residents’ car ownership, use of alternative transportation methods, travel habits, and current feelings regarding the parking system in Collegetown. The survey was completed by 396 respondents, and included individuals in large apartment buildings, multiple dwelling units, and single family homes. The residential survey found that students make up the majority of Collegetown residents. As a result, the Collegetown population is highly transitory, and the most cited reasons for owning a car are for shopping, entertainment, and traveling in and out of Ithaca. Conversely, more non-students were found to be living in Belle Sherman. The residential survey showed, on average,
non-students have higher car ownership. The survey also revealed that many residents are not satisfied with metered parking, and rental parking fees at private residences.

**Methodology and Results: Business Surveys**
The Business Team administered two separate surveys to 54 of the 79 counted businesses in Collegetown: a business owner/manager survey, and an employee survey. Surveys were administered in-person, except for some employee surveys that were left at businesses and picked up at a later date. One manager or owner was interviewed at each of the participating 54 businesses, and a total of 70 employee surveys were completed, comprised of 50 full-time and 20 part-time employees. The surveys found that many employees working non-traditional hours or living outside of the City of Ithaca find it difficult to rely on public transportation due to scheduling conflicts. Additionally, many employees utilize on-street parking, and Dryden Garage is under-utilized due to inconvenience issues. While the parking situation negatively affects many businesses’ deliveries, the effect of parking on customers was hard for business managers to address, since most customers come from foot traffic.

**Methodology and Results: Stakeholder Interviews**
The Stakeholder Team conducted qualitative interviews with key stakeholders groups to gather more in-depth information than would be available through survey data. The groups interviewed included political stakeholders, residents, students, members from the business community, and individuals from relevant organizations. Key stakeholders were identified through conversations with the client, as well as through referrals, and archival newspaper research on interested parties in Ithaca. A baseline set of questions were created and revised for each stakeholder group, and interviews were subsequently conducted in teams of two to ensure accuracy. The main finding from the stakeholder team is that there are divided opinions about the extent of the parking problem, as some stakeholders believe that a parking shortage exists, while others believe that the parking shortage is only perceived.

**Recommendations**
The larger survey data, as well as interviews with key stakeholders in the Collegetown area, suggest that there may be an adequate amount of parking stock. The parking utility survey found that the parking space vacancy rate hovered around 15 percent, which is considered a healthy use rate. However, this reality of empty spaces must be reconciled with the general perception that parking in Collegetown is difficult to a level that is detrimental to businesses, residents, and Ithaca as a whole. The full catalogue of interviews, surveys and data suggest that the problem lies in the ease and convenience of access to the current parking supply. In order to alleviate this issue, we offer these recommendations:

**Convenience of Existing Parking**
- Update policies at the Dryden Garage. Dryden Garage has a far higher vacancy rate than its neighboring properties. Clearer advertising may help alleviate some confusion about prices for the garage. The parking scheme may have to be adjusted due to the fact that many parkers regard the fees in Dryden Garage to be too high; in addition there is a perceived need for the implementation of short term parking rates. The last Dryden Garage recommendation is to revamp the token payment system, which has been made ineffective due to the need for a human token collector in order for the tokens to be utilized.
- Change the On-Street Parking System. Current parking meters lack the technology to set parking prices as variable rate parking to account for peak and off-peak parking times. New technology would also allow the machines to accept credit cards and other different payment methods that would increase consumer convenience. Another recommendation is to offer varying maximum time allotments at meters to increase parking diversity throughout Collegetown. For example, thirty-minute parking spaces directly outside retail properties would make metered spaces available to customers, and increase parking turnover in the main business area. Moving certain
loading zones, such as the loading zone in front of Plum Tree Restaurant, would also improve parking efficiency and increase pedestrian safety.

- Improve Consistency of Parking Enforcement. Parking Enforcement in Collegetown is regarded as very inconsistent from block to block. Other suggestions include the creation of a neighborhood parking benefit zone, to allocate ticket dollars to improve Collegetown specifically.
- Create a knowledge database of parking distribution information. There are divergent beliefs about the parking shortage, and part of that could be asymmetric information about where parking spaces are located. A central knowledge base of the location of parking spaces and the price could reconcile the divergent beliefs about parking spaces.

**Alternative Transportation Methods**

- Increase TCAT service to operate additional late night buses, as well as to increase the frequency of routes to additional locations in and out of Ithaca. Many Collegetown employees work non-traditional hours, which are not aligned with the bus schedule, thus requiring them to drive to work. Several Collegetown employees live in outlying districts and would require extended service hours for the routes in and out of Ithaca to make public transportation a feasible alternative.
- Expand the number of long-distance routes for entering and exiting Ithaca to major cities. Many residents of Collegetown have stated that the main use of their car was to get in and out of Ithaca (for example, for semester breaks). However, currently the long distance bus carriers typically only have routes out of Ithaca to New York City. Expanding long-distance bus routes to cities such as Boston, Philadelphia, and Washington D.C. may reduce the number of spots functioning as long-term car storage.
- Increase the number of bike racks and bike parking spots. Many Collegetown visitors and employees bike in lieu of driving, but several have expressed frustration about the limited number of bike racks at which to safely park their bikes. Increasing bike racks may increase the number of people who bike instead of drive.
- Increase Public Awareness of Alternative Transportation Methods. The availability of alternative transportation in Ithaca does not appear to be widely known. For instance, an Omniride bus pass at Cornell comes with a discounted Ithaca Carshare membership but that is relatively unknown by students.

**Collaboration with Cornell University**

- Commission a research study to determine where Cornell University students without campus parking permits park their cars. There is a persistent belief that Collegetown streets are congested with Cornell students’ vehicles, however there is no data to support or negate this claim. Further research on this issue could both help guide future planning, as well as shed light on the parking needs in Collegetown.
- Increase public awareness of parking costs. The city has several social marketing campaigns, and one could be implemented with Cornell University to help educate students on the transportation infrastructure so that the cost of parking spaces is better understood by students.
- Partner with Cornell University on the use of Cornell’s Southwest Lot. Cornell’s SW Lot is private, yet is often vacant, and the empty parking spaces are coveted by neighboring businesses. A partnership could be developed that would yield more parking spaces in the area as well as increase revenue for Cornell.
Map 1
II. Literature Review

At the onset of the parking study, the student consulting team reviewed relevant literature to learn about common parking issues, and to become familiar with common conventions and analyses in similar studies. Numerous parking studies have been conducted in various cities and neighborhoods to analyze the complexities of parking’s effects on businesses, residents, traffic flow, and the overall vitality and wellbeing of cities. Of particular relevance to this study is research focused on other college towns. The literature review covers three other parking studies: University of Southern California study, Town of Chapel Hill, North Caroline study, and the original 2000 Collegetown parking study. It also focuses on broad parking considerations related to downtown and business development. Examining parking issues, particularly those surrounding colleges and universities, demonstrates how the concerns around Ithaca’s Collegetown are shared and addressed in other communities.

**Parking in College Town Communities**

The University of Southern California (USC) commissioned a qualitative study in 2005 of parking on campus and in surrounding boundaries. The study identified parking concerns in their college town area similar to those in Ithaca’s Collegetown, chiefly (1) exceptions to regulations; (2) un-enforced regulations; (3) inefficient utilization of existing parking stock; (4) pricing inefficiencies; and (5) the fact that public transit is not a viable alternative for some individuals regularly using the college town area, but not living within its boundaries.\(^1\) The University of Southern California study advocated for an educational campaign. This campaign took a three-pronged approach to public engagement: raising awareness of the issue, helping the community to feel more empowered, and ultimately leading to changes in behaviors. The university’s research revealed opportunistic behavior (taking advantage of certain parking areas), as well as antagonistic attitudes (negative feelings towards residents with cars, or the University itself, which many perceived as the cause of the parking problem). The study also highlighted how different residents within the various regions of the town held different priorities, with some holding sustainability and alternative transportation as a top priority, whereas others prioritized convenience and accessibility.

Another study was commissioned by the Town of Chapel Hill, North Carolina in December of 2008.\(^2\) The study assessed the existing parking system in the downtown area from both a qualitative and quantitative perspective. The Chapel Hill parking study inventoried and reviewed the town’s parking situation, and made recommendations regarding issues such as future parking, operations, management, and enforcement. The study found that 62 percent of residents and visitors drove their own cars and found parking when visiting the surrounding downtown area. The majority of those remaining either took the bus or walked, and the rest stated that they rode their bike, carpooled, got dropped off, or relied on other forms of transportation. The study also found that although most commuters agreed that parking spaces were hard to find and often located in inconvenient places, the majority of drivers were not willing to pay an additional fee for more convenient parking.

Both the USC and Town of Chapel Hill studies are significant, since they mirror findings of the updated 2012 Collegetown Parking Study:

- parking tends to be a contentious issue in college town areas,
- there are some antagonistic attitudes towards student drivers and car traffic, and

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\(^1\) University of Southern California Steering Committee & Blue Garnet Associates. (2005). University Park University-Community Parking Study. Presentation made to the USC Community Advisory Council on October 20th, 2005.

there are often contradictions between individual’s stated preferences and actual behaviors related to parking and transportation.

Moving forward, these studies may be useful to the City of Ithaca for identifying best or common practices to address these issues. Looking at Ithaca’s own past is equally as important. The Ithaca Collegetown parking study, prepared for the Collegetown Moratorium Subcommittee, provides the template, as well as vital information for this updated report. Seven essential pieces of analysis formed the study: Parking Inventory, Residential Survey, Owner/Manager Survey, Employee Survey, Usage Survey, License Plate Survey and Evening Parking Survey. Demographic statistics show that in 2000, 94 percent of the residents in Collegetown were students; the population was, in general, very transitory, as 95 percent of residents had lived there for fewer than five years. In the 2000 study, car ownership in Collegetown was high and varied significantly by building type, with residents in multiple-dwelling units reporting the highest rate of car ownership (62 percent). As for car use, 93 percent of surveyed residents reported needing to use a car ‘very regularly,’ and the purpose of using cars concentrated on travel related to entertainment, shopping, and traveling in and out of Ithaca. Many of these trends persist into 2012, and recognizing which Collegetown characteristics and behaviors have persisted will be important for prioritizing which parking issues to address through policy changes.

**Local Business and Economic Development**

Parking policies that are well-aligned with economic growth and business accessibility can play an important role in supporting local businesses in the long term. In this regard, it is important to look at the potential impact of parking on the development of the local economy, and much research exists on how parking can be structured to support businesses and economic development.

Meyer and McShane attempt to explain the role of parking in relation to economic development strategies, specifically the impact of parking policies on urban economic development, and how to use parking strategies to stimulate downtown development. In their 1982 study, they found that parking strategies were used to achieve urban goals including growth of new businesses and investments. Meyer and McShane addressed four parking management strategies: control of aggregate parking supply, control of access to parking, control of spatial distribution of parking, and control of price. Parking policies can impact a broad range of urban development goals. For example, the goal of a government to increase revenues can be achieved by manipulating parking prices, and for development purposes, the government may control parking locations in ways that are beneficial to local businesses and encourage customer traffic.

In 1983, Meyer and McShane conducted a follow-up study to clarify the significance of parking in relation to regional development projects. The study found that transportation-related requirements and considerations, including the development of parking policies, did not play a significant role in encouraging or discouraging private developers’ investment decisions. Interviews suggested that developers did, however, prefer the construction of parking facilities by governments as opposed to constructing parking facilities themselves. Therefore, parking and transportation considerations are still important aspects of economic and business development, and determining who is responsible for providing such facilities may be important in attracting businesses to a community.

“Don’t Even Think of Parking Here,” a 1997 study conducted by Wormser, quotes Fred Kent, who was then the President of Partners for Public Spaces. The study argues that parking tends to matter most in

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areas and places that are not significantly attractive or important in a region.\textsuperscript{6} In other words, people are willing to walk and use public transit to places that are worth traveling to, even without the convenience of a car, whereas convenient parking is a more important incentive for travel to more unpopular areas. Additionally, unused parking spaces are expensive since cities fail to collect revenue from them, but must continue to maintain them; if these vacant spaces are in a parking building, they tend to cost more. Wormser suggests that relaxing parking requirements may help to transform a local area into a more attractive place for business developers, since parking requirements significantly increase costs, and relaxing such requirements may act as an incentive for new investment. This sentiment is shared by some local developers in Ithaca’s Collegetown, as evidenced by several stakeholder interviews included in this report. In contrast, other developers, including some in Ithaca, believe that students and consumers expect parking on-site or near where they live, and therefore parking is a necessary amenity for attracting consumers. For smaller developers, the construction of parking spaces can be more costly compared to larger developers who can take advantage of economies of scale, which allows them to distribute the cost more widely when pricing their apartments.

Donovan and Seymour emphasize the costs of on-site free parking.\textsuperscript{7} In many cities, on-site parking is required as part of an urban development strategy. Such a parking requirement provides accessibility and convenience of the venue to customers; however, it also encourages people to drive, and thereby contributes to traffic congestion, and pollution. Furthermore, parking construction costs are included in the overall development costs as a hidden cost, making a new development more costly, and also leading to higher rental costs for tenants and residents as the cost is passed on to them. High parking construction costs may also have the effect of prohibiting development by smaller developers, since parking costs may make an investment less profitable, and hence they may decide it is unfeasible.

Similar to Donovan and Seymour, Donald Shoup argues that parking in most cities is too cheap, thereby encouraging people to drive, and causing congestion and pollution.\textsuperscript{8} He also shares Donovan and Seymour’s view regarding the high development costs caused by parking requirements. Shoup argues that cities require businesses—even small ones—to build parking spaces, and this often has the unintended effect of wasting land and driving up development costs. He points out that “the cost of parking is hidden in higher prices for everything else.”

In contrast, a 2007 article published by the US Federal News Service explains the benefits of on-street parking. The study of six city centers by the University of Connecticut found that old downtowns with on-street parking are more vibrant and provide a better environment for pedestrians than those without such parking.\textsuperscript{9} According to their findings, on-street parking helps local areas to be safer and more comfortable for pedestrians, because the downtown area is easier to access, and because on-street parking tends to slow down traffic and make streets more conducive to pedestrian activities. Greater vibrancy and activity from pedestrian traffic potentially improves economic activity as well.

The Chicago Metropolitan Agency for Planning (CMAP) says in their ‘Go To 2040’ plan, a comprehensive regional plan that is documented on the CMAP website, that surface parking lots tend to reduce the economic success of a downtown, and therefore controlling parking supply can be beneficial for the economy.\textsuperscript{10} Local governments may see it differently, however, since parking is important for maintaining tax revenue. According to the plan, a parking strategy of reinvesting parking revenue towards

improving streets can upgrade the attractiveness of a retail center. The city of Pasadena implemented this method. Pasadena added parking meters and invested the revenue in trees, lighting, safety, and cleaning. The result was successful since local businesses grew as the location became more attractive for shopping and resulted in increased pedestrian traffic.

Many of the findings of these studies are echoed in the findings of the updated 2012 Collegetown Parking Study. As Ithaca seeks to increase pedestrian activity, support local businesses in Collegetown, and increase convenience and access to the area, it is clear that parking policies can play a vital role in achieving these broad goals.
III. Parking Inventory and Usage: Methodology and Results

Scope
The 2000 Collegetown Parking Usage Study included four sections: parking inventory, usage survey, license plate survey, and an evening parking survey. Another study of the area, conducted in July 2012, included three sections: parking inventory, usage survey, and parking turnover study (license plate survey). This updated report has therefore been divided into four areas of study: parking inventory, weekday and weekend usage, license plate survey, residential overflow study in order to update current parking stock in a manner comparable to past studies.

The geographical scope of parking usage analysis started with the Collegetown Parking Overlay Zone (CPOZ), meeting the same geographical scope of the 2000 study, with an expansion to the western residential neighborhoods of North Belle Sherman (from Linden Ave to Ithaca Road). The expansion allowed for examination of potential overflow into the adjoining residential area, which was requested and defined by the City of Ithaca Planning Department. Parking spaces were categorized into three different groups: on-street metered, on-street unmetered, and off-street parking. The inventory and usage data were collected and organized in these three categories. The usage of the Dryden Road Garage was tracked separately.

Methodology
The purpose of the parking inventory was to create an accurate count of on-street and private off-street parking spaces within the CPOZ, and of on-street parking spaces within the Belle Sherman residential neighborhood bordering the CPOZ. In order to facilitate quick data collection, the CPOZ was divided into five zones, with each zone assigned to a team member. Data collection consisted of each researcher walking through the study area and counting every on- and off-street parking space in their assigned zone. The data was collected on September 3rd, 2012, and was subsequently sorted by type of parking space (on-street metered, on-street unmetered, Dryden Garage, and off-street).

Each team member also recorded the physical location of every space and off-street lot so that the results could be displayed in map form. In order to ensure accuracy, all spaces were counted by physically visiting the location of the parking space. When counting unmetered on-street spaces and off-street spaces in unmarked lots, however, it was sometimes necessary to estimate the actual quantity. We were able to resolve the on-street estimates into a concrete number during our usage surveys when the actual number of cars able to fit along the curb could be observed, but there was no similar usage method to be used for off-street parking. For this reason, the total number of spaces is presented as a range rather than a single figure.

The purpose of the parking usage survey was to determine how the current parking supply is being used. This was done through a survey of how many on-street parking spaces were occupied in the CPOZ at different times. In addition to the overall usage count, each street in Collegetown was recorded separately to see if there were localized trends in parking changes between weekdays and weekends. To obtain a complete picture of usage patterns, we conducted the survey on a weekday and a weekend day to determine the impact of Cornell’s activities on parking usage.

We conducted the weekday usage survey on Wednesday, September 26th, 2012 when Cornell was in session, and the weekend usage survey on Sunday, September 9th, 2012. During four selected times of day, team members took count of the occupied spaces in their assigned zones. Only usage data of on-street (metered and unmetered) parking was recorded; off-street parking was not included in the usage study. Some instances of illegal parking were observed and were noted in the results. Additionally, in order to accommodate researchers' schedules while still capturing overnight usage, the 6 am time slot was
substituted with the 1:30 AM time slot. It was felt that the 6:00 AM time slot could provide an accurate estimate of overnight parking.

The license plate survey was designed to determine how on-street meters and the Dryden Garage are used throughout the day. Every metered space in the CPOZ was observed, in addition to the Dryden Garage spaces. The license plate survey was completed on Thursday, October 4th, 2012 when Cornell University was in session. Starting from 12:00 PM, two team members walked through the same path in Collegetown, and copied down the license plate number for each car parked in the Dryden garage or each car in a metered space on-street. Our path began at the top of the Dryden Road Garage and then proceeded South down College Avenue. The route then covered meters in the eastern part of the CPOZ, and then along the northern edge down to Stuart Ave. This procedure was repeated every hour from 12:00 PM to 6:00 PM. Each round took approximately 45 minutes.

A more detailed account of the assumptions, advantages and disadvantages of the team’s counting methods is included in Appendix A for potential use in future parking usage studies.

**Results: Parking Inventory**

<table>
<thead>
<tr>
<th>Type of Space</th>
<th>Original 2000 Study</th>
<th>2012 Study</th>
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</thead>
<tbody>
<tr>
<td>Metered On-Street</td>
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<td>Metered On-Street</td>
</tr>
<tr>
<td>Unmetered On-Street</td>
<td>410</td>
<td>Unmetered On-Street</td>
</tr>
<tr>
<td>Private Off-Street</td>
<td>2000</td>
<td>Private Off-Street</td>
</tr>
<tr>
<td>Dryden Road Garage</td>
<td>217</td>
<td>Dryden Road Garage</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2776</strong></td>
<td><strong>Total</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Belle Sherman On-Street</td>
</tr>
</tbody>
</table>

The table on the left depicts the parking inventory as measured by the original study conducted by Greig in 2000. It is important to note that in the 2000 study, the amount of private off-street parking was estimated using aerial photography and refined using a physical count.

The table on the right shows the results from this study. The majority of spaces—approximately 69 percent—are located in private, off-street lots. These lots are usually reserved for residents of the house or apartment building next to which the particular lot is located.

The observed usage rates for on-street parking are consistent with the studies conducted by Greig in 2000 and by Rich & Associates in July 2012. Small increases in metered and unmetered on-street parking were observed. This is offset by a lower off-street count in this study compared to the 2000 count. The final count of the 2000 study falls near the final upper range calculated by this study. The distribution of on-street and off-street spaces in the CPOZ and Belle Sherman neighborhood is illustrated on the following pages.
Parking Spaces in the Collegetown Parking Overlay Zone
Ithaca, NY

Creator: Henry McCaslin
Date: 11/6/2012
Projection: Transverse Mercator
Data Source: City of Ithaca GIS and CIPA 2012 Capstone Class

Legend
- Unmetered Spaces
- Collegetown Parking Overlay Zone
- Metered Spaces
- Road
- Off-Street Parking Spaces
- Building

Data contained in this document was provided or derived from data developed or compiled by the City of Ithaca, and is the best available to date. The originators do not warrant the accuracy or completeness of the information portrayed by the data.
Map 3

Parking Spaces Near Collegetown in Belle Sherman
Ithaca, NY

Creator: Henry McCaslin
Date: 11/5/2012
Projection: Transverse Mercator
Data Source: City of Ithaca GIS and CIPA 2012 Capstone Class

Legend
- Blue: On-Street Parking Spaces
- Gray: Road
- Red: Study Area
- White: Building

Data contained in this document was provided or derived from data developed or compiled by the City of Ithaca, and is the best available to date. The originators do not warrant the accuracy or completeness of the information portrayed by the data.
Map 4

Population by Census Block
Collegetown Parking Overlay Zone - Ithaca, NY

Creator: Henry McCaslin
Date: 10/3/2012
Projection: Transverse Mercator
Data Source: City of Ithaca GIS and 2010 US Census

Total Population: 4,865

Legend

<table>
<thead>
<tr>
<th>Census Blocks</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 - 200</td>
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<tr>
<td></td>
<td>201 - 400</td>
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<td>401 - 600</td>
</tr>
<tr>
<td></td>
<td>601 - 800</td>
</tr>
<tr>
<td></td>
<td>801 - 1000</td>
</tr>
<tr>
<td></td>
<td>1001 - 1200</td>
</tr>
</tbody>
</table>

The bold numbers on each block are the population counts as provided by the 2010 US Census.

Data contained in this document was provided or derived from data developed or compiled by the City of Ithaca, and is the best available to date. The originators do not warrant the accuracy or completeness of the information portrayed by the data.
Map 2: Parking Spaces in the Collegetown Overlay Zone illustrates the spatial distribution of metered and unmetered on-street spaces, as well as private off-street spaces and the Dryden Road Garage spaces. On-street metered spaces are indicated by a blue dot, on-street unmetered spaces are indicated by a yellow dot, and off-street spaces are indicated by red dots. A small number of parking spaces were included that fall in off-street lots just outside the CPOZ border because they were connected to residences that lie within the CPOZ. Overall, parking spaces of all types are spread across the area. Metered spaces are concentrated along the northern blocks where more commercial properties such as restaurants, bars, and retail stores are located. The areas with unmetered parking are largely residential.

There are a few areas where off-street parking is particularly concentrated. Some of these concentrations fall in the northern blocks where commercial properties are located. One particularly large concentration in the center-north of the map is the Dryden Road Garage. By comparing the distribution of off-street spaces in Map 2 with the census population depicted in Map 4: Population by Census Block, it becomes clear that parking density roughly correlates with population density by block. One noticeable discrepancy is the most populous block, shown on the map with a population of 1016, possesses very few off-street parking spaces for the number of residents who live there.

It is important to note that Map 4 uses data from the 2010 US Census, while the parking data obtained in this report is from 2012. For this reason, the population data for the block south of E. State Street within the CPOZ has not been included in Map 4. Since 2010, the construction of a large number of new residential apartment units and indoor parking has been underway. This development is known as the Collegetown Terrace apartments. According to John Novarr, the developer of Collegetown Terrace, the new apartments will contain 1,011 new beds and 686 parking spaces. This is an increase of approximately 500 beds over the previous residential capacity of the area. Map 2 depicts the parking spaces already constructed for Collegetown Terrace. Novarr expects that the parking accompanying the apartments will be sufficient to meet the needs of the residents, based on his experience that approximately 50 percent of residents—who are almost entirely Cornell University students—bring cars to Ithaca.

Map 3: Parking Spaces near Collegetown in Belle Sherman depicts on-street parking spaces within the area of the Belle Sherman neighborhood covered by this study. Spaces are evenly distributed on every street, with the exception of Ithaca Road and Mitchell Street, which experience higher traffic and therefore possess no spaces. There is also no parking along the eastern portion of Oak Avenue.

Overall, the population of the CPOZ is 4,865, according to the 2010 US Census. Once completed, the Collegetown Terrace apartments will increase the population by about 500 beds. This results in a projected CPOZ population of 5,365. If the lower estimate of this study’s total parking count is used, then these residents are served by 2,632 on- and off-street parking spaces. This results in 2.2 residents for every parking space. This ratio of residents to parking spaces may fall should Collegetown Terrace build more parking. This is likely, as some parking spaces were still under construction when the inventory count of that area was conducted.

Results: Parking Usage
Using the same methodology and survey on a weekday and a weekend ensured that the data collected was comparable, and allowed for an analysis of the impact of Cornell University students on parking in Collegetown. General findings on occupancy rates are as follows:
Weekends
Since metered parking is free on weekends, metered parking and unmetered parking are the same in the weekend survey (both being no price to drivers). We observed very high metered parking rates relative to the weekday survey, with the lowest observation at 70 percent occupancy. 70 percent occupancy at 6:00 AM suggests that the majority of those cars counted were parked overnight. Surprisingly, while the high rate of use for metered parking shows people’s need for parking spaces, the Dryden Garage occupancy rate turned out to be very low. This might be because people are trying to avoid paying for parking.

Weekdays
In the weekday survey, the team surveyed cars at 1:30 AM instead of 6:00 AM, to accommodate schedules and because both were considered suitable times to measure overnight parking. During these times, the metered parking occupancy rates decreased significantly, and Dryden Garage occupancy rates increased.
Comparison between Weekdays and Weekends

Compared to the usage on weekdays, there was a slightly higher occupancy rate in the morning and a lower rate in the afternoon and evening on the weekend. This shows relatively low parking demand overall on weekends, with the exception of late night or overnight parking.

The utilization rate of Dryden Garage dropped sharply on the weekend. In contrast to this, the demand for on-street parking appeared to increase during this time. A likely cause is that meters are free on weekends, so accordingly people choose to park on the street to avoid paying a fee at the garage. Accordingly, there was a significant increase in the utilization of metered spaces on the weekend (when they are free). At the same time, people no longer relied on the un-metered spaces (which are less centrally located), which caused the occupancy rate of un-metered spaces to decrease. The only exception was the 6:30 PM slot. Regardless of whether the spaces were metered, unmetered or in the garage, the occupancy rates were lower during the weekend. One possible explanation for this exception is that Collegetown residents tend to go out of Collegetown instead of staying home on weekends.

According to the data, people’s parking behaviors appear to be determined significantly by pecuniary factors. The high prices of the metered spaces or garage parking may prevent them from parking there, which leads to the underutilization of these parking facilities.

Study Comparison

Earlier in 2012, Rich & Associates Parking Consultants conducted a similar parking usage study of Ithaca’s Collegetown Area in April 2012. The researchers observed and recorded the number of cars parking in Collegetown every hour from 8am to 8pm. Compared to the study done in July 2012, the September 2012 results on weekdays are slightly lower.

<table>
<thead>
<tr>
<th>Weekday Percentage of Occupied On-Street Spaces</th>
<th>July 2012 Study</th>
<th>Updated September 2012 Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00</td>
<td>-</td>
<td>74%</td>
</tr>
<tr>
<td>9:30</td>
<td>78%</td>
<td>72%</td>
</tr>
<tr>
<td>13:30</td>
<td>79.5%</td>
<td>75%</td>
</tr>
<tr>
<td>18:30</td>
<td>85.5%</td>
<td>75%</td>
</tr>
</tbody>
</table>

Although there is some difference between these two studies’ results, the data are similar. The September counts estimated 595 on-street parking spots, while the Rich & Associates Parking Consultants estimate was 538. It is reasonable to assume that this difference in total parking inventory accounts for the percentage differences.

Belle Sherman Neighborhood – Eastern Annex

The Belle Sherman neighborhood is mostly single-family homes, and there was a concern that high demand for parking in Collegetown might cause spillover parking into the surrounding neighborhoods. An area extending from the CPOZ east to Ithaca Road was included to determine parking usage rates during the day.

<table>
<thead>
<tr>
<th>Belle Sherman Inventory</th>
<th>6:00AM</th>
<th>9:30AM</th>
<th>1:30 PM</th>
<th>6:30 PM</th>
</tr>
</thead>
</table>
The parking occupancy of the Belle Sherman neighborhood fluctuates very little throughout the day. The table above shows the percentage of the estimated 216 on-street spaces that were occupied at different times.

Residents of Ithaca may petition the City to designate their neighborhood as a residential parking permit zone in order to regulate the number of cars that can park on the street. Belle Sherman lies within such a permit zone. Cars without permits are subject to all normal on-street parking regulations, including a restriction on parking along certain blocks between 9:00 AM and 1:00 PM, or 1:00 PM and 5:00 PM, as indicated by signage. A car bearing a valid parking permit is exempt from this particular requirement (but must abide by all other regulations). Permits are only available to residents of the permit zone and cost $45 per year.

As part of the Belle Sherman inventory count, a survey of permits was conducted at 9:30 AM, 1:30 PM, and 6:30 PM on Wednesday, October 24th. A survey of permits was not available for the 6:00 AM survey, since it was still dark and condensation on car windows prevented a reliable count. As the day went on, it appears as though the number of permit parkers decreased, but the neighborhood showed an overall low utilization of available on-street parking. No tickets were observed during this time, but since weather conditions made it difficult to determine whether permits were in place on vehicles overnight, there may have been little enforcement. The western portion of this area saw heavier usage, but this may be due to the prevalence of student-oriented housing near the edge of Collegetown. It is possible that because of its proximity to student housing, this neighborhood is more affected by odd-even restrictions during the winter months.

Results: License Plate Survey

<table>
<thead>
<tr>
<th>Duration of Parking in Garage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than 1 Hour</td>
<td>270</td>
</tr>
<tr>
<td>1-2 Hours</td>
<td>124</td>
</tr>
<tr>
<td>2-3 Hours</td>
<td>76</td>
</tr>
<tr>
<td>3-4 Hours</td>
<td>51</td>
</tr>
<tr>
<td>4-5 Hours</td>
<td>39</td>
</tr>
<tr>
<td>5-6 Hours</td>
<td>26</td>
</tr>
<tr>
<td>6+ Hours</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Duration of Parking on Street</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Less Than 1 Hour</td>
<td>255</td>
</tr>
<tr>
<td>1-2 Hours</td>
<td>122</td>
</tr>
<tr>
<td>2-3 Hours</td>
<td>31</td>
</tr>
<tr>
<td>3-4 Hours</td>
<td>2</td>
</tr>
<tr>
<td>4-5 Hours</td>
<td>5</td>
</tr>
<tr>
<td>5-6 Hours</td>
<td>0</td>
</tr>
<tr>
<td>6+ Hours</td>
<td>0</td>
</tr>
</tbody>
</table>

The survey of metered parking shows that the majority of metered parking seemed to be short-term, with the majority of cars parked staying for less than one hour. A total of 91 percent of parkers occupied their space for less than two hours, which means that almost 10 percent of parkers exceeded the two hour limit over the duration of our survey. This is a change from the 2000 survey, wherein about 70 percent of cars were parked for two hours or less.

The Dryden Garage saw slightly less short-term parking, with just over 65 percent of parkers staying for two hours or less. Many cars on the top level were parked there for longer durations, which could mean that employees and residents favor the garage. In the 2000 study, 39 percent of parkers stayed for two hours or less. This shift could be the result of using a shorter window of observation.
The average demand for spaces in the Dryden Garage was 85 spaces, or 39 percent of the spaces available. The peak demand occurred at noon, with 123 cars parked (57 percent occupancy) and gradually trailing off during the day.

The average demand for metered parking was approximately 66 spaces, or 42 percent of the total. Demand for metered parking hit a high point at 1:00 PM, and then began to increase rapidly as 6:00 PM approached. The peak demand at 6:00 PM represented 97 spaces (60 percent occupancy). This could be a result of the two hour limit being unenforced after 6:00 PM, with parkers choosing metered spaces where they could be used for longer periods of time. This is a drastic decline from the results of the 2000 survey, when the average usage rate of all of the paid spaces was 80 percent. It is possible that more students bring their cars to Ithaca over the spring semester, but other changes could be responsible. The price of parking in the Dryden Road Garage was recently increased, which could have led to an overall decrease in demand. New developments with private off-street parking or increased TCAT service may have also contributed to lower garage utilization.

Implications of these findings can be found in the What the Data Tells Us section, beginning on page 46. Additional surveys, including surveys of residents, business owners and managers, and employees were also conducted, as in the 2000 study, and are described in the following pages. The parking usage data, combined with these surveys as well as interviews with key stakeholders, allowed for the development of recommendations, which can be found at the conclusion of this report on page 48.

<table>
<thead>
<tr>
<th>Time</th>
<th>Total Cars Parked in Garage</th>
<th>Total Cars Parked at Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00</td>
<td>123</td>
<td>47</td>
</tr>
<tr>
<td>1:00</td>
<td>106</td>
<td>66</td>
</tr>
<tr>
<td>2:00</td>
<td>89</td>
<td>61</td>
</tr>
<tr>
<td>3:00</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>4:00</td>
<td>79</td>
<td>76</td>
</tr>
<tr>
<td>5:00</td>
<td>72</td>
<td>77</td>
</tr>
<tr>
<td>6:00</td>
<td>46</td>
<td>97</td>
</tr>
</tbody>
</table>
IV. Residential Survey: Methodology and Results

Scope
The residential survey team worked in the same geographical area as the parking usage team, covering the CPOZ area as well as Belle Sherman. The residential survey was distributed and made available to residents in Collegetown, and included with questions centering on car ownership, alternative transportation, and travel habits. The sample size of the survey was 445 respondents with 396 completed surveys, and included individuals in large apartment buildings, multiple dwelling units, and single family homes. The key goal for this survey was to better understand residents’ opinions on the current parking situation, and determine specific improvements they would like to see.

Methodology
The Residential Team revised the original 2000 Residential Survey with questions that were more consistent with developments in Collegetown over the past decade. For example, the 2012 survey asks whether or not someone has an Ithaca Carshare account, an alternative transportation option that was not available in 2000. After revising the original residential survey, the survey questions were tested on five test participants living in the Collegetown area to ensure clarity and reliability. Given the 2010 Census estimate of 4,800 residents in the CPOZ, the goal sample size for the survey was set at 400 respondents.

Team members went door-to-door in Collegetown to administer the survey to residents between September 28 and October 1 in the CPOZ zone, and on October 5 in the Belle Sherman area. Interviews were conducted on both weekdays and weekends, as well as during different times of the day to limit sampling error. The CPOZ zone was divided into five zones, and split equally among the five members of the team, who surveyed each zone in pairs.

If the resident was home, they were asked to fill out paper survey in person. To reduce refusal rates, team members described survey solicitations as an opportunity for residents to impact and change city policy. Any additional comments or conversations between team members and residents were recorded during the survey. Residents who were not home or who did not have time to fill out the survey were given a promotional flyer about the study and a copy to fill out later, which team members would pick up at a later date. The flyer was strategically created with a QR code linking it to an electronic version of the survey to increase survey convenience and response rates. Once a dwelling unit was completed—either someone had filled out the survey, or a flyer was left—the interviewer moved on to the next dwelling, coming back to pick up any remaining surveys that residents had left outside of their doors.
To further increase the door-to-door response rate, available roommates were asked to complete the survey, and door-to-door efforts were increased between 4:00 PM and 7:00 PM, which were found to be the best times to survey. Alternative methods included sending out the survey link through relevant e-mail listserves, including landlords’ tenant mailing lists, Cornell Off-Campus Housing, Graduate Student, and Collegetown Association’s mailing lists. College Association events and campus gatherings provided additional venues for distributing surveys. The survey was active and able to solicit responses for 36 days.

In total, 445 residents submitted responses, resulting in 396 total finished surveys. The sample size of 396 surveys is very close to the goal sample size of 400, which resulted in a statistically significant sample size from which reliable inferences about the study population could be made.

As with any quantitative analysis, there are limitations. The first limitation to this study was participation self-selection. People who experienced parking problems in Collegetown may have been more motivated and likely to respond than those who have not, which could skew the representativeness of the final sample. In addition, some survey questions meant to measure resident attitudes were constructed using a scale of 0-5, which may not have adequately reflected residents’ true feelings.

One of the primary differences in terms of analysis between this survey and the 2000 survey was the division of the population by subgroup. The 2000 report divided subgroups by different housing types. Housing type is not the most useful indicator for differentiating resident opinions, however. Data was therefore divided into new categories to develop insights into more important differences among residents, and analyze the corresponding different opinions and behaviors among them. Data was divided into subgroups such as "student" vs. "non-student," and residents living "Belle Sherman" vs. residents living in "Collegetown." Accordingly, most of the data was analyzed and regressed against those two kinds of divisions.

Finally, the Residential Team conducted a focus group of residents to collect qualitative and anecdotal evidence to supplement survey data. Five residents participated, who included a Cornell student, a Cornell professor, a Belle Sherman resident, and two landlords. The focus group questions and a summary of responses are included in Appendix C.

**Results: Residential Survey**

Students constitute the majority of residents in Collegetown. Approximately 74 percent of residents who filled out the survey were students, while non-students account for 26 percent of the sample. Accordingly, the Collegetown population is very transitory, 57 percent of respondents had lived in Collegetown for less than two years, and 79 percent had lived in Collegetown for less than five years. There are more non-students residing in Belle Sherman than in Collegetown areas, however. On average, non-student residents have higher car ownership than students.
The responses regarding overall parking satisfaction of residents give valuable insights into resident behaviors, and how these individuals might respond to changes in the parking systems. The following chart breaks down student and non-student resident perceptions regarding parking problems in Collegetown:

<table>
<thead>
<tr>
<th>Main Parking Problems Observed in Collegetown</th>
<th>Average Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not enough parking spaces at residences</td>
<td>3.74</td>
</tr>
<tr>
<td>Not enough parking spaces on the street</td>
<td>3.96</td>
</tr>
<tr>
<td>Not enough parking spaces in the garages</td>
<td>3.03</td>
</tr>
<tr>
<td>Parking is too expensive at residences/garages</td>
<td>4.04</td>
</tr>
<tr>
<td>Too many students with cars</td>
<td>3.24</td>
</tr>
<tr>
<td>Unreasonable parking time arrangement</td>
<td>3.27</td>
</tr>
</tbody>
</table>
The overall impression of the parking situation in Collegetown is that parking is very inconvenient. This view is shared by student and non-student residents alike. In response to the question, “please assess your opinion of the parking situation in Collegetown on a scale of 0 to 5,” where 0 indicated “most convenient,” and 5 indicated “most inconvenient,” 42 percent of students and 40 percent of non-student residents gave the overall situation a score of 3.83. With a mean response of 4, Collegetown residents hold a negative opinion about the current parking situation.

Compared with non-students, student residents are more unsatisfied with parking in Collegetown. On the same question asking about the convenience of parking in Collegetown, approximately 94 percent of student residents scored the situation as 3 or higher, meaning their assessment and view of the situation was either neutral or that of inconvenience, while 81 percent of non-student residents answered with a 3 or higher.

Both students and non-students have similar perceptions as to what parking problems exist. Both students and non-students consider “not enough parking spaces on the street,” and “unreasonable parking time arrangement,” as parking problems.
Around 94 percent of students and 72 percent of non-student residents expressed the need to park on the street in Collegetown. Agreement rate on “not enough parking spaces on the street” and “unreasonable parking time arrangement” between student and non-student residents were statistically the same. In both groups, over 50 percent of respondents agreed on those statements. It is reasonable to conjecture that there is unmet demand of on-street parking. The following chart indicates preferred solutions to fix parking problems. The last option has the highest average support, suggesting that both student and non-student residents desired improved public transport.
The main divergence in opinion between student and non-student residents regarding types of parking problems spans three options; namely, that there are “not enough parking spaces at residences,” that “parking is too expensive at residences/garages,” and that there are “too many students with cars.” These discrepancies can explain, to great extent, the differing preferences on parking solutions between students and non-students.

About 73 percent of student residents agreed or strongly agreed that there are “not enough parking spaces at residences,” while only 47 percent of non-student residents felt similarly. Therefore, when rating solutions, approximately 32 percent of students strongly expressed the need for “house owners provide more parking spaces” while 34 percent of non-student residents strongly disagreed with this option.

More students also responded that “parking is too expensive at residences/garages.” About 71 percent of students strongly agreed with the statement, while only 10 percent of non-student residents strongly agreed. In addition, 73 percent of students express that they have not brought a vehicle to Ithaca because the parking fee is too expensive. That students think parking at the garage is too expensive is evidenced by the fact that there is low parking usage of garages.

More non-students cite a major cause for the parking problem to be that there are “too many students with cars.” Around 56 percent of non-student residents strongly agreed that “too many students with cars” is the biggest driver of the parking demand, but only 12 percent of student residents cited this as a major factor. Accordingly, when asked about the preferred solutions for remedying parking problems, as high as 63 percent of non-student residents strongly recommended “provid[ing] incentives to not own a car,” while most students were not in favor of this solution.

The survey suggested that students and non-students share similar patterns in where they park with more students parking on nearby streets. Both students and non-student residents park on property, with rates of
43 percent and 95 percent, respectively. About 35 percent of students say that they paid to park in private lots, which may explain why most non-student residents do not think parking in Collegetown is expensive. The second highest choice for parking was on a nearby street. About 38 percent of student and 23 percent of non-student residents parked in a nearby street. Some survey respondents indicated that their use of city or Cornell University parking facilities is low, either because they are far from campus or require a parking permit or fee.

![Where Residents Park](image)

Student and non-student residents also revealed different parking time preferences. More than 50 percent of student residents indicated a need to park in Collegetown all day, while 72 percent of non-student residents parked in Collegetown for less than 2 hours. On weekdays, the most difficult parking time periods for student residents was cited as 4:00 PM-8:00 PM, while non-student residents cited 2:00 PM-4:00 PM. On weekends, both student and non-student residents agreed that 4:00 PM-8:00 PM was the most difficult time to find a parking space.

**Belle Sherman vs. Collegetown Area**

After delineating the subgroups by residents living in Belle Sherman versus residents living in the more immediate Collegetown area, the data showed that amongst survey respondents, people living in Belle Sherman are generally content with parking. In addition, there is no significant correlation between "Belle Sherman" and "problem with on-street parking," so residents living in this area tend to think on-street parking situation is satisfactory, as compared with residents living immediately in Collegetown.

**Car Use**

The survey revealed a strong correlation between type of car use and type of resident. The difference in use frequencies could be attributed to differing travel needs between students and non-students. Students often use cars to drive to campus and for travel outside of Ithaca, while non-student residents more often use cars to go to work, in which case the need for driving is much less elastic. Overall, both types of residents are reliant on cars and drive frequently. Non-student residents tended to use cars more often than students, with about 48 percent of non-student residents saying they use their cars every day.
While looking at the purpose of using cars, student and non-student residents are equally likely to drive for “shopping”, “entertainment” and for traveling “in and out of Ithaca.” This data is consistent with the findings from the 2000 Collegetown Parking Study.

<table>
<thead>
<tr>
<th>Purpose of Car Use</th>
<th>Go to Campus</th>
<th>Shopping</th>
<th>Work</th>
<th>Entertainment</th>
<th>In/out Ithaca</th>
<th>Household errands (i.e. using your vehicle to drive child to school)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>47.6%</td>
<td>90.2%</td>
<td>34.1%</td>
<td>66.5%</td>
<td>86.0%</td>
<td>52.4%</td>
</tr>
<tr>
<td>Non-student</td>
<td>22.2%</td>
<td>88.9%</td>
<td>43.2%</td>
<td>64.2%</td>
<td>82.7%</td>
<td>62.4%</td>
</tr>
<tr>
<td>Total</td>
<td>39.2%</td>
<td>89.8%</td>
<td>37.1%</td>
<td>65.7%</td>
<td>80.0%</td>
<td>62.4%</td>
</tr>
</tbody>
</table>

While there are similarities between student and non-student resident car use, results also varied by subgroups. Student residents were more likely to drive to go to campus, while non-student residents were more likely to drive for work or household errands. Since campus is relatively close to Collegetown, it is convenient for students to choose other transportation modes, such as walking to campus or taking a bus, so they do not need to use cars every day. Non-student residents may need to drive to work or pick up children, therefore using cars is necessary. These differences may explain why non-student residents have a 40 percent higher frequency of using car everyday than student residents.
Travel Behavior
Survey results regarding use of alternative transportation show that most people have either chosen or developed the habit of using one certain transportation method. The results indicate that there is room for growth in use or investment by Collegetown residents in alternative modes of transportation. Below is a table of the percentage rate of student and non-student residents who claimed to never have used a certain alternative travel model.

| Percentage of Residents Who Never Use a Certain Alternative Travel Model |
|-----------------------------|----------------|----------------|----------------|----------------|
|                             | Bicycle        | Bus            | Carpool        | Walk           | Carshare       |
| Student                     | 73.0%          | 29.2%          | 17.6%          | 0.0%           | 82.4%          |
| Non-student                 | 48.2%          | 34.1%          | 59.2%          | 2.2%           | 74.7%          |

Notable differences between student and non-student residents include:
(1) 40 percent more non-student residents use bicycle than students.
(2) 70 percent more student residents use a carpool than non-student residents.

Results: Residential Focus Group
The focus group allowed for the elaboration on several issues brought up in the data, particularly with regard to parking and alternative transportation convenience. The survey data suggested that shopping was an important motivation for residents to bring cars, which was echoed in the focus group. Participants suggested that a taxi stand located in Collegetown would increase access to stores such as Wegmans and Walmart, and decrease the need for a car in the area. Additionally, participants suggested that increased nighttime bus services—particularly to towns outside Ithaca—are needed, a sentiment that was also shared by business managers and employees.

While restricting students from bringing cars to campus might alleviate the traffic congestion, focus group participants stated that it was important to be realistic about students’ expectations and needs. Students don’t want to be confined to a single area for the entire school year; instead, they want to take advantage of off-campus activities throughout Ithaca. Alternative transportation cannot match the comfort of a private car, but many residents see this behavior as a luxury instead of a necessity for the students. Also, some parents support the idea of their children owning a car because they want them to maintain the lifestyle they had at home. These parents are willing and able to pay for the car usage and parking costs. Participants felt that students will always bring cars, and therefore it was important to increase the effectiveness and convenience of available parking.

Participants noted that parking meters in some areas are underutilized, and some meters do not work, which makes matters worse for parking space availability. If the goal is to increase the supply of available parking spaces, then parking regulations must be enforced regularly, and meters must be kept in working order. Increasing roadways and pathways from campus to Collegetown may also make it easier for students to park on campus and walk to areas in Collegetown.

Finally, residents felt that there were not enough bike racks in Collegetown and on the Cornell campus. Furthermore, they saw it as inconvenient that faculty members can’t make use of the current bike racks placed in campus, since they are reserved only for students. Another issue was the landscape of Cornell University; residents claimed that it is difficult to carry a bike up the stairs and hills, and that Cornell needs more bike paths to connect campus buildings. Residents suggested that business managers could also place bike racks outside their businesses to increase use of bikes to go into Collegetown.
Summary of Findings
The data indicates that there is no shortage of parking spaces, and non-student residents pointed out that there are empty parking spaces in residences. Additionally, the city and school garages are not frequently used. Data therefore suggests that residents are dissatisfied for three main reasons:

(1) Non-ideal parking space distribution: For on-street parking, people are not satisfied with meter arrangement. For residential parking, some parking spaces are restricted for rent, but often remain empty.
(2) Lack of understanding among students of the real cost of parking spaces: Building and maintaining parking spaces is very expensive for developers, which sets the floor for parking rental prices well above students’ expectation. Students feel that parking fees should either be included in their rent or to be set as low as possible.
(3) Misperceptions by residents regarding the amount and effect of students with cars: The average score rated by non-student residents for parking problems is as low as 2.5, except for the option, “too many students with cars.” Non-student residents felt strongly that there were too many students with cars. It may only appear to non-student residents that students are bringing too many cars into the area, whereas in reality, there are relatively few who choose to do so compared to the number of students who possibly could.

V. Business Survey: Methodology and Results
Scope
The scope of the business surveys included 79 businesses, which were counted and identified by the Business Survey Team at the onset of the study in September 2012, including retail, rental, public service, and restaurant establishments located in the CPOZ. Of the original 79 businesses, several went out of business or closed for renovation during the surveying process, which took place over the months of September and October, 2012. Employee responses were collected from each of the successfully surveyed businesses.
Methodology
In order to assess parking needs and patterns associated with businesses in Collegetown, team members administered two surveys: a business owner/manager survey, and an employee survey. Both documents were adapted from the 2000 Collegetown Study in order reflect changes in alternative transportation options over the last decade, as well as to make survey questions more streamlined. The most significant changes to the surveys were therefore to add questions that captured use and preferences surrounding Ithaca Carshare and a potential bike share program. Secondary revisions to the surveys included ensuring question clarity, and using scaled preferences to more accurately capture respondents’ opinions.

Team members walked through Collegetown to count and take inventory of every operating business. A recorded total of 79 businesses were split evenly among the five team members, and contact/location information for each business was collected. Owner/manager surveys were administered in person, and each business in Collegetown was visited one to three times over the course of two months. In order to reach an owner or manager, several visits to a single site were sometimes required. Since most owners were rarely on site, the majority of responses came from managers. For businesses who rarely had a manager on site familiar with the business’ parking concerns, as well as for those businesses that rarely had a reprieve from busy customer traffic during the day, the team attempted to reach out over email with an electronic link to the survey, or schedule appointments to meet with a manager during a convenient time. Of the 79 businesses originally counted in Collegetown, site visits were made to 79 businesses, and 54 business managers/owners were successfully interviewed, for a total response rate of 68 percent.

Since employees were often busy or working odd shifts, the team attempted to survey any available employees during on-site interviews with managers, but stacks of the employee surveys were also left on-site to be picked up at a later date, generally within one week. This posed some challenges, as many surveys were reported lost or misplaced when it came time to return to the site to retrieve them. Additionally, some employees worked in several Collegetown locations; therefore, there is a chance that some individuals responded twice. A total of 70 employees responded to the survey, comprised of 50 full-time workers, and 20 part-time workers. The total number of employees estimated to work at surveyed businesses is 464, suggesting that although 70 is an adequate sample when full-time and part-time workers are analyzed together, more research may be required to fully understand the transportation and parking patterns of surveyed larger sample of employees in the future.

To interpret survey data, qualitative trends from conversations with business owners/managers were analyzed to identify any compelling comments and overarching themes/commonalities, as well as anecdotal evidence of parking issues. All survey data was then entered into the online Survey Monkey system in order to statistically analyze the data.

In addition to administering and analyzing the two surveys, the Business Team conducted three interviews with two TCAT officials, and one Collegetown landlord, respectively. The interview questions were provided over email, and responses were similarly sent back over email in an attempt to provide a convenient mode of communication for the interviewees, who had also been contacted by other teams for this study. The purpose of the interviews was to give the business team greater context for the intersections between business and residential parking concerns. While the content of these interviews was not formally included in the survey findings, they provided important contextual information, since many employees, and business owners and managers were only familiar with parking issues immediately surrounding their storefronts.

Results: Business Owner/Manager Survey
The following breakdown of respondents provides a snapshot of the business composition in Collegetown:
Recognizing business types in Collegetown is important, since different business sectors require different parking requirements for customer convenience. For instance, restaurants need longer-term customer parking (around 2 hours), while convenience stores require shorter-term parking for customers (15 minutes, for example). Restaurants comprised approximately 52 percent of the sampled businesses in Collegetown. Out of the respondents represented, approximately 20 percent have some form of private parking associated with the establishment. Approximately 35 percent of respondents paid some kind of fee for parking, either in rental spaces or Dryden Garage parking tokens for employees.

The following graph illustrates the peak periods in parking that owners and managers believed to be the most difficult times to obtain a parking spot in Collegetown:

The afternoon and early evening periods are identified as the highest occupancy times for parking outside businesses. The highest peak period, as identified by surveyed manager/owners, is Saturday between 4:00pm and 8:00pm.

Deliveries were an important and contentious issue for Collegetown businesses. About 90 percent of respondents claimed that their businesses received deliveries. Of businesses who receive deliveries daily, approximately 53 percent indicated that they receive deliveries twice a day. Of those businesses who received deliveries weekly, approximately 35 percent cited a frequency of 3 times a week.
Around 52 percent of managers and owners surveyed cited mid-day (12:00 PM-4:00 PM) as the time that they most often receive their deliveries. Over 55 percent of respondents claimed to have experienced some form of problem with deliveries with respect to parking or delivery truck loading zones. Delivery problems identified as the most significant included a lack of space for trucks to park, in addition to loading zones being too smalls for trucks. The issue cited as the least significant was loading zone locations being inconvenient for the property.

Business managers were asked about the possibility of paying a premium to coordinate business deliveries in Collegetown. An overwhelming majority, approximately 94 percent, answered that they were not interested in such an arrangement. Managers explained that coordinating deliveries was not feasible since they received deliveries from multiple carriers both in and out of New York State, and businesses themselves often do not have control over delivery schedules. Additionally, since the majority of businesses (52 percent) receive deliveries at the same time, 12:00 PM to 4:00 PM, and most managers expressed that this time met their needs, it is likely that even with coordinated delivery times, most businesses would prefer to stay in this timeslot, and congestion would remain a concern.

The survey also assessed how businesses perceived access to customer parking. Out of the 54 owner/manager respondents, 50 percent claimed that the parking needs of their customers were being met, illustrating a divide on how parking is impacting Collegetown business. Those who believed there was a parking problem argued that the three primary causes were too many residents with cars, not enough parking spaces in the garage, and garage parking that was too expensive. To mitigate these problems, several businesses suggested that providing additional parking spaces at residences and discouraging car ownership for Collegetown residents would be the best solutions. The survey also gauged the interest of businesses in participating in a consortium to provide TCAT bus passes or other alternative modes of transportation to employees. The majority (74 percent) were uninterested.

Finally, the survey captured scaled opinions for what issues may be causing parking challenges and problems in Collegetown, the results of which are illustrated in the chart below:

### Business Managers: Causes of Parking Issues

- Too many residents with cars: 23%
- Not enough parking spaces in the garages: 19%
- Parking is too expensive at residences/garage: 13%
- Transit service is inadequate: 9%
- Unreasonable parking time arrangement: 9%

**Results: Employee Survey**

According to data provided by business owners and managers, a total of 464 employees worked for the Collegetown businesses included in this study. The following graph is a summary employee breakdown. It shows that food and dining businesses provided the largest source of employment in Collegetown,
accounting for 72 percent of total employment. Part-time employees working for this type of businesses outnumber their full-time coworkers by 42 percent. Retail stores and services jointly provide 19 percent of total employment. They also have a high percentage of part-time employees compared with apartments and university employers. The latter two hire a majority of full-time employees.

<table>
<thead>
<tr>
<th>Number of Employees Counted in Collegetown</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eatery</strong></td>
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<tr>
<td>----------</td>
</tr>
<tr>
<td><strong>Full Time</strong></td>
</tr>
<tr>
<td><strong>Part Time</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
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</tbody>
</table>

The employee survey received 70 responses, 50 of them were from full-time employees, and 20 responses were solicited from part-time employees.

<table>
<thead>
<tr>
<th>Number of Employee Participants by Type of Business</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eatery</strong></td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td><strong>Full Time</strong></td>
</tr>
<tr>
<td><strong>Part Time</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
</tr>
</tbody>
</table>

The response rate was low among food and dining businesses, which have the highest percentage of part-time employees in Collegetown. An important reason for this was that restaurant workers did not have adequate time during their shifts to complete the survey. This discrepancy may give rise to sampling bias.

Employment density and composition in Collegetown varies by time of day, and day of the week. Full-time employees were more likely to work a traditional schedule full workweek, as 54 percent of them worked five days during weekdays, and 30 percent did not work on weekends. Part-time employees, on the other hand, worked more on weekends. Half of them worked on both Saturdays and Sundays.

<table>
<thead>
<tr>
<th>Average Number of Days Worked During Workweek</th>
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<tbody>
<tr>
<td><strong>Days</strong></td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>
### Average Number of Days Worked During a Weekend

<table>
<thead>
<tr>
<th>Days</th>
<th>Full Time</th>
<th>Part Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15 (30%)</td>
<td>3 (15%)</td>
</tr>
<tr>
<td>1</td>
<td>13 (26%)</td>
<td>7 (35%)</td>
</tr>
<tr>
<td>2</td>
<td>22 (44%)</td>
<td>10 (50%)</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>20</td>
</tr>
</tbody>
</table>

The following chart shows the percentage of employee respondents working at a specific time during a weekday. It might not be an accurate reflection of work density dynamics of the whole Collegetown area; however, the results clearly reveal certain patterns.

**Employment Density**

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Employment Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>10AM</td>
<td>25.71%</td>
</tr>
<tr>
<td>11AM</td>
<td>45.71%</td>
</tr>
<tr>
<td>1PM</td>
<td>65.71%</td>
</tr>
<tr>
<td>4PM</td>
<td>70.00%</td>
</tr>
<tr>
<td>7PM</td>
<td>51.43%</td>
</tr>
<tr>
<td>9PM</td>
<td>32.86%</td>
</tr>
<tr>
<td>11PM</td>
<td>21.43%</td>
</tr>
</tbody>
</table>

On a typical workday, most employees start working around 11:00 AM, and employment density reaches a peak of 79 percent at 4:00 PM, which coincides with the time that many Cornell University classes end for the day. This percentage gradually declines to 33 percent around 9:00 PM when bus routes end. Around 21 percent of employees are still working at 11:00 pm, due to the late hours of dining places and grocery stores. Weekends see a similar pattern in terms of changes in worker density.

Full-time employees have distinct commuter characteristics from their part-time counterparts. The following results illustrate several differences between full-time and part-time employee work commute solutions.
Driving was a more prevalent choice for full-time workers. Carpooling was not a common practice among them, as the ratio of rider per “self-driving” was found to be significantly lower among full-time workers, as compared to part-time workers. Being driven by others was a popular commute solution among part-time workers. Though auto-based commuting had roughly the same use among full-time and part-time employees, the percentage of use of shared rides was doubled with part-timers. When it came to alternative means of transportation that do not generate parking congestion, such as bus and bike use, full-time employees tended to use public transit more frequently, while their part-time counterparts preferred walking. A likely explanation for this is that part-time employees tend to be students who already live on top of the hill in Collegetown, and therefore can walk and bike to work more easily.

Employees who drove to work were asked to indicate the frequency that they parked at available types of spaces in Collegetown. Frequency was translated into a percentage value, and for each respondent, these numbers add up to 100%. The table below summarizes the likelihood that employees would choose to park at a certain kind of space.
The breakdown between full-time and part-time employees invites further insight into their distinct parking patterns. Full-time workers did not use the city garage as often as part-timers, where their relatively fixed work schedules and higher income may have suggested a higher rate of use. The difference is off-set by the fact that full-time employees parked more often in private off-street spaces. On-street parking satisfied up to 60 percent of work parking needs. Metered parking might not be utilized as often as the figure shows, however. This kind of parking space tends to be used by employees who start working shortly before on-street parking becomes free at 5:00 PM (as meter maids stop supervision) or 6:00 PM (as meters are officially set to start being free of charge). They would pay for an hour or two and enjoy free parking for the rest of their shift. Considering this kind of circumstance, meter usage rate should be adjusted downwards while free parking upwards. The average cost of work parking for employees who drive was estimated at $45 a month. Given that less than 20 percent of them spent more than $100, which indicates regular use of an off-street parking space, it can be inferred that the median cost for employees is well below $45.

Notably, use of the Dryden Garage was low, which is counter-intuitive, since the longer-term parking that the garage offers is more aligned with the long-term shift parking requirements an employee might need. Within the group of employees who park at Dryden Garage at least “sometimes,” only 13 percent had monthly passes to the garage. Most people thought the pass, which costs $120 per month or more, was unaffordable, and businesses seldom provided parking at the garage for other than core employees. Business managers also expressed that the token system for Dryden Garage was not ideal. Tokens are only sold downtown, and it is difficult for busy managers to get there to purchase tokens during the day. Additionally, tokens can only be accepted as payment if an attendant is present at the garage, as the automated payment machine is not equipped to accept them. This means that even those employees whose workplaces do provide tokens must pay for garage parking if they work when an attendant is not present. These concerns collectively help explain the low use of the garage.

Among respondents, the average walking time from parking space to work was about five minutes, which loosely equates to two blocks. Most people walked for around two minutes. This means more than half of employees can park around the center of Collegetown, and most parked within two blocks of their workplaces.

When asked why employees do not choose public transit as a means of work commute, 46 percent of respondents mentioned that they “live too far from a route,” while 37 percent were concerned with the “bus schedule not fitting their work schedule.” About 30 percent of employees needed a car for non-work related trips, and “preferring driving as a lifestyle” accounted for 33 percent of general concern when people did not use transit.
Subsidized bus passes seem to be a moderately enticing incentive to encourage public transit use among employees. Around 33 percent of respondents expressed willingness to use public transportation more often if their employers covered the fares. A cross tabulation between the type of work schedule and people’s responses to subsidized rides showed that full-time employees were more responsive to benefits in reduced travel cost. It is uncertain, however, as to what extent they might reduce driving and release parking spaces to the rest of the community. A cost-benefit analysis requires further research. It is also important to note that a majority of employers were not interested in subsidizing bus passes for their employees, making the implementation of such initiative difficult at this time.

### Attitude Towards Subsidized Bus Passes

<table>
<thead>
<tr>
<th></th>
<th>Full Time</th>
<th>Part Time</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Responses</td>
<td>15 (45%)</td>
<td>4 (17%)</td>
<td>19 (62%)</td>
</tr>
<tr>
<td>Percentage</td>
<td>33.3%</td>
<td>23.5%</td>
<td>30.6%</td>
</tr>
</tbody>
</table>

1. Live far from routes  
2. Too slow  
3. Schedule does not fit with work  
4. Too infrequent  
5. Not on time  
6. Work-required driving  
7. Non-work related need for driving  
8. Prefer walk/bike as lifestyle  
9. Prefer driving after balancing costs and benefits  
10. Prefer driving as lifestyle
Over one-third (36 percent) of respondents responded positively to a car share program as a potential solution to their work commute; Part-time employees were more interested in this option, as 56 percent of respondents who answered this question expressed willingness to participate, while 26 percent of full-time workers showed interest.

A less popular, but important alternative was a bikeshare program. Only 19 percent of respondents indicated interest in using it as a commute solution. Although the Cornell and Collegetown provide a cycling-friendly environment, a bicycle ride from Valentine’s Place, for instance, or downtown up to Collegetown is an inconvenient and difficult physical task for most people. During the winter, safety concerns effectively eliminate the option of biking throughout the whole city.

Summary of Findings
Business owners, managers, and employees appeared able to find parking nearby their workplaces, although use of metered and on-street spaces was high, while use of Dryden Garage was low. Since employees may need to park their cars for several hours during their shift, this might contribute to increased parking congestion and lower parking turnover in Collegetown. Additionally, while managers were not interested in providing subsidized transportation, employees appeared to be responsive to such incentives. The effects of parking on customers was unknown to many managers, since most customers are from foot traffic, and not enough information is available regarding potential unmet demand for customer parking, although many managers cited difficulty finding short-term parking around their storefronts for customers. The implications of these findings are discussed in the “What the Data Tells Us” and “Recommendations” sections, beginning on page 47.
VI. Stakeholder Interviews: Methodology and Results

Scope
Stakeholder interviews provided in-depth, qualitative data to supplement quantitative data gathered from surveys. In order to collect such information on a variety of parking issues in Collegetown, interviews were conducted with stakeholders including political stakeholders, residents, business people, and structural stakeholders. By conducting a comprehensive stakeholder analysis, the resulting recommendations reflect a level of depth regarding stakeholder opinions that are not available through survey data alone. This added information should also help in developing strategies to work with the different stakeholder groups. While the following interview results are useful for learning more about the various stakeholder groups, individual opinions expressed below are not necessarily representative of an entire group.

Methodology
In developing a list of key stakeholders, the Stakeholder Interview Team consulted with the City of Ithaca Planning Department to identify parties believed to be the most affected by any proposed policy changes. The team also consulted Ithaca Journal archives to find additional contacts involved in Collegetown parking conversations. Subsequently, a stakeholder mapping activity called “snowball sampling,” in which stakeholders are each asked to help identify and contact other affected parties who they believe should be included, was used to finalize the interview list. After a completed list was developed, stakeholders were divided into subgroups, including but not limited to: political stakeholders (such as Common Council members), residents, business people, and structural stakeholders (such as TCAT, and the Department of Public Works). A final list of interviews with stakeholders is included in Appendix D. Each team member was assigned a stakeholder group, for which they acted as the point person for scheduling and conducting interviews.

Despite several stakeholders belonging to more than one group, we structured our questions to account for the key demographic in which we had placed them. While individual stakeholders do not represent every perspective from within a stakeholder group, but rather, they can provide a representative perspective. Moreover, stakeholder interviews add anecdotal evidence to enrich the other largely quantitative data contained in this report.

In order to develop strong interview questions for stakeholder research, the Stakeholder Team analyzed survey questions from the business owner/manager, employee, and residential surveys, respectively, to ensure that interview questions were well-aligned for gathering the types of information that other groups were looking for as well. Volunteers then tested the questions to determine how long interviews were expected to take, and to correct for any confusion, ambiguity, or bias within the questions. The baseline set of questions underwent revisions before each interview, in order to tailor questions towards their intended audience, and to account for the specific concerns of the targeted stakeholders. In order to avoid bias or leading questions, interview questions were kept as open-ended as possible. For example, when asked if there was an initiative that respondents specifically agreed or disagreed with, the question did not suggest specific initiatives in an effort to not lead participants towards any predetermined answer. A comprehensive list of questions for each stakeholder group is included in Appendix E.

Whenever possible, team members conducted interviews in teams of two. One member was responsible for asking questions, while the other acted as a note taker. Conducting interviews in this manner helped to ensure comprehensive notes, and provided team members with an opportunity to debrief afterwards. With the subjects’ permission, some interviews were recorded. The Stakeholder Team also made the interview schedule public so that representatives from other project teams could attend. In regard to confidentiality, no respondents requested or were granted anonymity; however, the following results section has limited
the direct attribution of quotes to any specific individual, instead attributing quotes to the stakeholder group individuals represent in an order to respect individual privacy.

**Results**
The following sections include compiled summaries of the individuals interviewed from each stakeholder group. Presenting the data this way allows for overarching themes, commonalities and concerns within a stakeholder group to be identified.

**Results: Government Stakeholders**
Representatives: Mayor Svante Myrick, Common Council Members, Members of City of Ithaca Planning Department

Any future development of Collegetown must consider the current parking situation, as well as changes that would result from the growth of the population. The conclusions and recommendations developed in this study will aid in the determination of how or if the city should act to limit development or enhance density in the neighborhood. The number of actual physical spaces available and the times of the day are additionally important components of decisions yet to be made.

The current traffic and parking situation on the streets of Collegetown poses a danger to pedestrians and bicyclists, where heavy traffic and narrow sidewalks combine to create a hazardous environment for the business district. Additionally, with limited sightlines for vehicles entering and exiting crossing sidewalks, underground parking structures like the garage at 312 College Ave. are considered a threat to pedestrians. Furthermore, the limited availability of parking spaces, combined with the associated costs, creates eyesores, as some residents use lawns as parking lots. Neighboring communities are already faced with overflow parking from Cornell University and from Collegetown employees, though the residential parking permit program is considered to be successful. This program could possibly be expanded to Collegetown.

Bus service in many areas is too infrequent to allow Collegetown employees and commuting students to effectively rely on public transportation. An increase in frequency or a shift of existing routes might make it more feasible for these groups to use the bus. Consistent and reliable public transportation options may help alleviate many of the concerns for concerned stakeholders and their constituents.

The development of Collegetown should allow for growth while minimizing negative side effects. Collegetown is a mixed-use neighborhood, with a transient population. The challenge faced by the City is to increase density (as opposed to allowing sprawl), and parking functions as a primary check on density. The Council members hope to develop greater reliance on alternative forms of transportation, such as TCAT, Ithaca Carshare, and cycling, but believe that an increase in population will lead to an increase in cars.

The focus for development is on the core district. It is possible that market forces could reasonably control the type of development that occurs. Collegetown is the only district in the city that has placed responsibility on the developers to provide parking.

To encourage businesses to move into the area, Collegetown storefronts must be accessible. One possibility is to change the pay structure of the metered spaces by charging higher fees through the main business section, and lower fees further away. Businesses in the neighborhood have not established an organized representative body, thus each speaks for their individual concerns. This limits their capacity for coordinated action with city officials.
The City is not considering constructing a new garage at this time, and hopes existing resources can be optimized and improved. The City has discussed the possibility of reducing the parking available along College Avenue to allow for expansion of the sidewalks through the primary business district. Though there is concern that this could have potential negatives impacts on loading and bus zones in the district. The coin meters are due to be replaced, most likely with a centralized pay station, and the use of the wireless meters that allow for remote renewal is being investigated. The replacement would allow the city to remove the current meters, giving pedestrians a less obstructed path.

Loopholes need to be closed, such as the allowance of parking on yards, though enhancement of enforcement of parking time limits is not necessary. Though the city currently feels that the number of community service officers monitoring parking is sufficient, there are plans for the creation of a city-wide parking manager position that will be charged with determining the optimal use of parking facilities.

**Results: Alternative Transportation Providers**

Representatives: TCAT, Ithaca Carshare

TCAT has shown an increase in ridership since 2006, averaging 5-15 percent annually. Nonetheless, it has operated at a deficit in recent years with costs of just under a quarter of a million dollars, which is covered annually by the City of Ithaca, Cornell University, and Tompkins County equally. Although committed to providing necessary service, any changes that incur additional costs would have to be approved by the board, which includes representatives of these three entities.

A recent federal grant will allow TCAT to make infrastructural changes to increase efficiency, such as adding dedicated lights for the buses at the major stops downtown, and providing improved comfort for and information sharing with customers. Plans include real-time notification of bus locations, as well as building or installing shelters at new or existing bus stops. TCAT is working with the city to determine the location of these stops, which may replace older locations. One goal is to ‘pair’ stops, so an eastbound bus, for example, will stop directly across from the westbound, to simplify trip planning for riders. Other stakeholders would be affected by any such changes, however, as current bus stops are used for loading and long-distance bus services.

In addition to canopies, TCAT plans to add bike racks to bus stops. There are also plans to add electronic information signs providing real-time information regarding approaching buses, and TCAT is looking at the development of a web-based application that would provide real-time updates and assistance as well. Additionally, TCAT is interested in better understanding student and rider complaints and concerns regarding scheduling and route service that prevent public transit from being a viable option for some residents.

The public should be urged to consider multi-modal transportation, rather than merely a bus/car dichotomy. This would include education about options, including Ithaca Carshare and biking. He believes that the increase in ridership is in many ways a reflection of an attitude change, which prioritizes use of public transit.

Collegetown is the busiest neighborhood for Ithaca Carshare, though the organization believes that this is primarily a result of density, rather than the demographics of the neighborhood. Although the majority of the users are affiliated with Cornell in some way, it is estimated that only 1/3 of users are students. TCAT believes it could see further growth in the neighborhood, even if current conditions persist.
**Results: Students**  
Representatives: Cornell Collegetown Student Council (CCSC)

From the CCSC perspective, students who live in Collegetown have more severe parking issues than other local residents, since many do not have access to a garage or parking lot. Lack of parking facilities is the biggest issue from the students’ perspective. The parking fare is unreasonably high, as are the annual fee for permits and street parking meters. In some districts, students need a permit to park during certain hours, for example during weekdays from 8:00 AM to 6:00 PM, which is frustrating for potential drivers. As a result, those parking facilities seem to be underutilized. If students manage to find an on-street parking spot, they will often not move their car throughout the week, as it can be difficult to find another one. Even though they sometimes find it troublesome to park their cars in Collegetown, students still want to have their cars either to commute back home (outside of Ithaca) or to shop for groceries. Many students restrict the use of their cars during weekdays. Additionally, students feel that landlords should provide more parking facilities (one parking spot per room). They think the idea of opening a grocery store is great, as long as it would not make the on street-parking situation worse.

Many students would prefer to live in Collegetown, as the area is a social hub with convenient access to Cornell, which exacerbates the parking problem. Students want to be independent and live off-campus while remaining close to the social center and school facilities. It is difficult to encourage students to live in north campus or west campus. If there was the potential to create a social center in other places near campus, doing so would perhaps alleviate aspects of the parking problem in Collegetown.

**Results: Cornell University**  
Representatives: Cornell University Transportation Department, Government and Community Relations

The opinions of Cornell University representatives were very different from those of other stakeholder groups. The questions asked included: what they believe to be the biggest issue concerning parking, which initiatives have worked well, how Cornell has provided parking for students, and any other measures the school has taken to reduce the number of students who bring cars every year.

Interestingly, there has been a decrease in demand for Cornell parking. Due to a number of factors such as alternative transportation methods, the smaller size of the faculty and staff at Cornell, and availability of other parking, Cornell has never had such low demand for parking before. Cornell appears to want to keep a small vacancy of their current inventory, however, in order to maintain enough capacity for healthy growth.

The stakeholder group also had the opportunity to hear from a representative from Cornell Transportation Office of Commuter Parking and one of Cornell’s transportation engineers. This interview was particularly useful for the stakeholder group in addressing the concerns regarding the actions Cornell is taking in relation to these key transportation issues. They outlined many varied and affordable transportation options for Cornell students and staff, all of which are subsidized by the University. Some of these options include TCAT, Ithaca Carshare, Ride or Vanshare, Big Red Bike, as well as heavily discounted parking passes for carpoolers.

This conversation was very relevant, as many other stakeholders we spoke with bemoaned the fact that there was not enough parking at Cornell. However, the presentation made it clear that the parking spots existed, and in fact there was a parking surplus at the current level of demand.

A transportation expert, formerly with Cornell Transportation, was then interviewed about parking demand at Cornell. First, he made clear that the demand is far lower than people believe. For instance, out
of 3,500 freshmen, only 94 brought cars last year. Upperclassmen total about 200 permit requests for each grade level. Cornell University has never run out of parking permits.

Cornell representatives emphasized the University’s promotion of alternative transportation methods. For instance, they said that Cornell pays 80 percent of TCAT fares, as well as pays one-third of TCAT’s operating budget. Cornell also subsidizes Ithaca Carshare memberships. When asked about the concept that students just bring cars for storage (for instance only to drive home for Thanksgiving), we were told about the discounted lots at Cornell (such as the B lot) that exist for long-term car storage. Enforcement was mentioned as the biggest problem with parking in Collegetown; for example, resident-only parking stickers for cars could help alleviate instances of illegal on-street parking or unregistered parking at private lots.

From the perspectives of the representatives from Cornell University, the school has gone to great lengths to decrease the number of students bringing cars, and support alternative transportation methods. This, along with the fact that Cornell has a surplus of parking spaces, lends plausibility to the possibility that supply is currently meeting the demand, and an actual parking shortage does not exist.

One limitation to these stakeholders’ opinion that the existing parking supply exceeding parking demand is that Cornell University does not appear to have substantial data about where Cornell students’ cars are parked throughout the academic year. The Office of Commuter Transportation has detailed data on how many students request a parking permit for Cornell-owned lots. However, if a substantial amount of students were foregoing the option to buy a permit for a Cornell lot and were parking elsewhere, Cornell would have no data on this.

Results: Businesses
Representatives: Tompkins Chamber of Commerce

A Tompkins Chamber of Commerce representative stated that parking in Collegetown has been a persistent problem, but it is endemic of a larger cultural issue: the reliance on the automobile. The trend is changing, however, to where fewer people are relying on cars as a primary mode of transportation. With regard to the business community specifically, many of the Collegetown businesses thrive on walk-by traffic, but that many would prefer a wider market. The lack of parking right now could be driving away some potential customers, but no research exists to determine whether or not this may be true.

The business community is split both on their parking needs, and on the initiatives they support. Most think that the school should take more measures to deter students from bringing their cars. The biggest reason that Cornell students bring cars to Ithaca is because of the lack of a grocery store in Collegetown.

This business leader warned that because the business community is likely to have very divided opinions, a consensus will not easily be reached. For instance, some business owners may favor a parking lot waiver in order for a grocery store to be constructed, or because they are in favor of urban density, whereas others may feel that it is inequitable for the grocery store to receive a waiver, while they had to build parking. Other businesses rely so heavily on walk-by traffic that the parking issue is not very relevant to them.

Another local business owner and longtime landlord echoed the idea of the importance of foot traffic in Collegetown. There is not much of a need for more parking in Collegetown, but that existing options need to be reorganized or made more visible. The area is damaged economically because people do not know where to park, not that there is not anywhere to park. Making Collegetown more of a tourist destination, especially in the summer months, would help make the business climate more sustainable.
Business leaders all alluded to the concept of a divided business environment, and suggested the need for some cohesion among the different Collegetown entrepreneurs. They also suggested that parking is a problem in Collegetown, although they could not estimate how severe the problem was, since businesses rely so heavily on walk-by traffic.

**Results: Community Organizations**

Representative: St. Luke’s Lutheran Church

Collegetown serves as a meeting place for community organizations, especially those that specifically cater to the Collegetown community. One such organization is St. Luke’s Lutheran Church, which is located at the heart of Collegetown, near the intersection of Oak Avenue, Central Avenue, and College Avenue.

Although St. Luke’s is primarily a religious establishment, it also serves many community purposes. For instance, several other groups use its facilities regularly at various times: ESL classes, AA and similar 12-step groups, Cornell’s Melodramatics theatre group, Hong Kong Christian fellowship, Muslim prayer group, and others - including the Collegetown Neighborhood Council. St. Luke’s is a regular Fourth Ward polling place on election days.”

The St. Luke’s representative felt that parking was a real concern for parishioners as well as those who use the church for meetings. The parking lot holds around four cars; however, the typical Sunday morning attendance is 175. While many of the parishioners walk (because they are Cornell students), for many parishioners the only option is to drive, as public transportation is very limited on Sunday mornings. Parking is a problem even on weekdays. St. Luke’s used to have a program in partnership with the city that provided for free parking for parishioners in the Dryden Road lot during Sunday morning service, but that program was ended.

St. Luke’s conducted its own parking survey in 2011 and found that 85% of respondents drove to St. Luke’s. Over 22% of respondents stated that they sometimes have a problem finding a place to park, but only one respondent said it discouraged him from attending.

St. Luke’s and other community organizations in Collegetown play an important role in Collegetown’s vitality, but the current parking situation can present challenges to people using their services. There is a sense that the parking situation needs to be changed, specifically in regards to the expansion of public transportation, or assigned parking areas for specific needs.

**Results: Developers**

Representatives: Developers from multiple area companies; presented through anonymous comment

Overall, the developers who were interviewed are not satisfied with the current parking situation in Collegetown. Specifically, they were unhappy with the current regulations regarding the Dryden Garage, suggesting that it should be expanded, and the current restriction against overnight parking should be lifted. Some also suggested that the government should encourage more student-oriented businesses. In contrast, opposing voices argued that the current parking situation is sufficient, but that the government should take the parking requirements of the employees in Collegetown into consideration.

Developer A was satisfied with the current parking situation in Collegetown, specifically the Eddy Street area where his building is located. His 60-spot parking area is generally full. From his perspective, the proportion of students who bring cars to Collegetown has been consistent throughout the past 15 years.
As for the policy established in 2000, the developer suggested that it has limited real estate development in the Collegetown area. He recommended that government should take the parking concerns of the local employees into consideration in order to spur business growth.

Developer B was not satisfied with the current parking situation in Collegetown. He was supportive of the policy in 2000 and insisted that developers should build parking lots under their buildings. Though it would increase costs, developers could charge higher rent as compensation. The developer noted that in his experience, tenants bring cars at a consistent rate of around 50 percent. He owns 700 parking spots that are all full. Additionally, there are always some students who bring cars, but have no parking lot access.

Developer C was supportive of the Ithaca’s parking policy change in 2000 and argued that it helped reduce parking pressure on the neighborhood. He currently owns about 100 parking spots, which are always full, but he is unsatisfied with the city’s parking garage and insists that it should be bigger and less expensive. He also thought the regulation restricting cars from staying overnight at the parking garage is unreasonable and should be changed.

Developer D was neutral towards the city’s parking policy change in 2000. He argued that it actually benefits owners and businesses in small buildings that do not require too many parking spaces. As more and more students bring their cars to Collegetown, he suggested that the government should increase commercial zoning to encourage student-oriented businesses and consider hotel residence for the convenience of students’ family and friends.

Results: Tompkins County Climate Protection Initiative

According to this representative, a shortage of parking facilities in Collegetown exists, in the sense that it often takes a substantial amount of time to find an on-street parking spot in close proximity to one’s destination. The number of Cornell University students who choose to live in Collegetown and bring their cars with them is increasing, having a detrimental effect on parking. Accordingly, discouraging students from bringing their cars can help to solve this issue. He acknowledged that the mayor has been working with TCAT to try to increase the frequency of buses, which will make it more convenient for people who do not have cars. He also suggested that Cornell University should provide more transit opportunities to major cities, such as Boston, New York, and Philadelphia. He suggested that landlords provide more parking facilities to their tenants, and make parking more expensive to discourage students from bringing their cars. This source believes that students who want to bring their car here do so for convenience. From a climate protection point of view, Cornell should also implement more policies to reduce student car use.

Summary of Findings

As the summaries suggest, there is a great diversity of opinion surrounding parking in Collegetown. Many stakeholder opinions are in direct conflict with each other, as some feel that there is a need for a greater number of parking spaces, while others state that there is only a perceived need and the overcrowding problems stem from other concerns. The biggest difference in stakeholder opinions is that many, such as the Climate Control Initiative and Business Owners, believe that Cornell University is not doing enough to discourage students from bringing cars. On the other hand, the Cornell administration feels that they already have a multitude of programs—as well as data—to show that students do not bring as many cars as people suspect. These findings cannot stand alone; however, they provide important insight into the interests and diverse situations among relevant stakeholders, and accordingly have been heavily incorporated into informing the following recommendations of this study.
VI. What the Data Tells Us

While analyzing individual survey data is important for understanding how parking affects particular groups, looking at the aggregate data across surveys and interviews reveals overarching concerns across groups, and provides a fuller picture for possible policy directions.

The combined data suggests that Collegetown does not necessarily have a parking stock problem, but convenience and management of already existing spots can be improved. As the parking usage data shows, parking occupancy rates in Collegetown typically hover around the 85 percent mark, and rarely exceed 85 percent, which is generally considered the optimal occupancy rate for parking policy. This data is supported by survey and interview responses from students, residents, and business owners; while one’s first preference parking space may not be available, these respondents overall indicated that parking was available in other areas of Collegetown. For example, employees indicated that although they may have to walk approximately two blocks from their car to work on average, they were able to find parking. Additionally, Dryden Garage data revealed that the facility is under-utilized across days and times of the week. Usage data, as well as employee parking data, show that the garage is the least utilized parking area. Similarly, small landlords who were interviewed indicated that over the past several years, they have had more trouble renting out their parking spots, compared to previous years. This anecdotal evidence,
combined with the quantitative data, suggests that there generally are parking spaces available, and adding additional spaces is not necessarily the answer for addressing parking concerns. Because of this data, it appears that the current parking requirement of one space for every two residents is also still relevant and viable in Collegetown.

Adding additional spaces that would increase the 1:2 ratio between parking spaces and residents could actually lead to negative externalities. For example, increasing parking spaces will make parking in Collegetown more convenient in the short-term, encouraging more drivers to bring a car and park. Potentially, this will only increase the number of cars in Collegetown taking up those spaces, and drivers at the margins will still cite inconvenient parking. This would not only increase congestion in the area, but it would be opposed to the current mayoral administration’s goal to increase pedestrian traffic and convenience. In an alternative scenario, adding additional parking spaces by changing the current parking requirements would only exacerbate rates of underuse in certain public facilities like Dryden Garage.

It appears, then, that it is not necessarily the parking requirement mandating one spot for every two beds in Collegetown that needs revising, as additional spaces would not necessarily address the concerns identified in this report. Rather, the data indicates that revising policies related to the already existing parking supply would be more appropriate for address major concerns. The data suggests that while there are parking problems in Collegetown, the overarching “Collegetown parking problem” may be an issue of perception and inconvenience. While additional lots and spaces need to be built to account for increased development and an increasing resident population, revising policies to make existing parking more convenient will address the concerns brought up in surveys and interviews.

Convenience is highlighted as an important concern, since many of the problems indicated by the community relate to perception and convenience issues. For example, business owners cited the Dryden Garage token system as inconvenient. Additionally, metered and unmetered spots along Oak Avenue encourage drivers to park farther up the street for free parking, and metered spots closer to College Avenue are underutilized. Instead of creating significant revenue, the metered spots only tend to make drivers park further away from College Avenue. Payment options for meters are also antiquated; it is inconvenient for many drivers to pay via coins compared to newer meter payment systems that accept credit cards, or pay-by-phone services.

In addition to convenience issues, many of those who were interviewed or completed surveys cited issues that fell within the realm of increasing alternative transportation access. In particular, employees in Collegetown who work non-traditional shifts (late night, all night, or early morning) are often precluded from using TCAT services, since bus service to many locations outside of the City of Ithaca limits stops running around 10:00 PM. Bus service outside of Ithaca also tends to run less frequently than internal Ithaca routes, meaning that students and employees needing late service to Lansing and Danby, for example, may not be able to receive such service via public transportation. Lastly, several respondents indicated that more bike racks are needed in Collegetown, and would encourage more people to bike in the area.

The recommendations in the following section attempt to elaborate on these issues, and also provide potential detailed solutions.
VIII. Recommendations

The following recommendations are based upon the preceding survey and interview results, as well as the overview of literature on parking policies and implications. Included is a range of potential recommendations that the city or other interested stakeholders could pursue, in order to provide an array of possible parking solutions. There is no one solution that will satisfy every constituent and interviewed/survey participant included in this study; however, we are confident that implementing a combination of the recommendations below can result in vast improvements in Collegetown parking for all stakeholders be they residents, business owners, employees, or visitors.

Increase Convenience of Existing Parking

Dryden Garage Considerations
A number of employees and business managers surveyed noted that many people often are not sure of the hourly rate in the garage, and so opt for paid or free on-street parking. Clearer price advertising could potentially increase garage use. Advertising on Dryden Road would help increase consumer knowledge of the garage, and mitigate instances of drivers choosing on-street parking over garage parking due to pricing confusion or lack of knowledge.
Adjusting the parking scheme for the garage could also increase the convenience of parking there. Several people who have used the Dryden Garage in the past said that they have had to find alternative parking solutions due to the high cost of the garage, particularly for short-term parking. Currently, all parking periods under one hour are charged as one full hour, meaning that customers must pay a full hour’s price, even if they only park for 30 minutes. Providing a 30-minute or 20-minute parking option for short-term parkers could help to mitigate instances of people choosing on-street over garage parking, and would help to decrease street congestion. This option would also optimize the Dryden Garage facility, which is rarely utilized to its full potential. Some survey respondents also suggested lower rates for those who must park all day, several times a week in order to compete with other parking options in the Collegetown area.

Additionally, several business owners and managers noted that they purchase garage tokens for their employees to help subsidize parking costs. However, tokens are only available to buy downtown, an inconvenient location for busy Collegetown business managers. A venue for selling tokens at the garage and potentially in a Collegetown service business would make tokens more accessible to those who work in the area. Another concern brought up regarding the current token system is that a teller must be on duty to accept the tokens as payment, meaning that employees who leave work during hours when tellers are not available must pay for their own parking in spite of best efforts by some managers and owners to assist with costs. Providing an automated system that can process tokens after teller hours would allow for easier payment processing and alleviate aggravation for employees who receive, but cannot use, employer parking assistance.

On-street Parking Considerations

On-street meters currently do not have the technology to adjust pricing throughout the day, so peak-parking times are priced at the same rate as times with lower demand. Collegetown could increase revenue and reduce congestion by updating meters to increase rates during hours in which parking demand is heaviest. Employers have also noted that parking spots directly outside of storefronts are always filled throughout the day, though usually not by customers. Adjusting meters outside of stores to have shorter time limits than other street parking may help to free up spaces for customers and encourage individuals to park for shorter times within the business district. Meters that accept alternate forms of payment such as credit or debit cards could make the parking more accessible than change-based meters, and could even be used to collect and report the usage of each space for further study.

Revising maximum parking time allotments for meters dependent on their location would also increase parking convenience by providing a greater diversity of parking options, as well as ensuring that parking spaces are managed in a way that corresponds with their location. Business owners indicated that two-hour time allotments on the metered spaces in front of businesses effectively made the use of those spots more convenient for medium-term parkers, but did not facilitate quick turn-around that would promote easier customer parking. Although restaurants may require one-to-two hour parking for customers, many of the service and retail businesses in Collegetown would benefit by having spaces outside their storefronts with 30 minute time allotments, for example, as to encourage turn around and free up spaces for customers.

Changing the spaces along Oak Avenue from metered to unmetered spaces may also be beneficial. As the usage study showed, the metered spaces have a much lower usage rate than the free spaces directly next to the meters. This indicates that there is a demand for parking there, however, the demand is not necessarily high enough for people to pay for parking in that location. Making the metered spots free—or reducing the cost of those meters—would result in only a nominal loss of revenue, but would likely free up use and convenience of parking on Oak Ave. This would also provide more accessible parking near the hub of businesses in Collegetown.
Finally, ensuring that on-street parking promotes public safety for pedestrians and other drivers is crucial for increasing convenience. Several business owners and residents noted the congestion on Dryden Road. The loading zone outside of Plum Tree Restaurant at 113 Dryden Road is on a part of the road that curves, limiting car passage and visibility when a truck parks there for deliveries. The loading zone increases congestion on Dryden Road and increases chances of car accidents. Moving the loading zone further up the road to where the street straightens out, which is currently used as metered parking, would allow for easier car passage. The metered spaces could then be relocated to the former loading zone area.

**Enforcement**

Business owner/manager interviews revealed that parking enforcement is limited or inconsistent on many streets in Collegetown. Resident responses similarly suggested that enforcement is not always consistent across days of the week. As a result, illegal parking in business delivery zones, parking at unpaid meters, and illegal parking in general may be at a higher rate. Parking infractions such as these not only increase congestion when cars occupy spaces that they shouldn’t, but it also decreases car turnover in spaces, contributing to the difficulty in finding a space. Revisiting enforcement routes and schedules to ensure that all areas of Collegetown are enforced may help decrease instances of illegal parking in loading zones and drivers who park past meter limits. Since Ithaca is hiring a new Parking Manager position, it may be an especially appropriate time to explore enforcement strategies and needs more in depth.

Enforcement could also be tied to Collegetown economic development goals. For example, to help alleviate the parking situation and to develop Collegetown, the city could create a neighborhood parking benefit zone. Once this zone is established, any parking fees and fines collected within this area would be put into a fund designated towards the development of Collegetown, as done in Pasadena, California (see page 5).

**Parking Distribution**

Data showed that residents feel there are many empty parking spaces in residential areas, but students feel the opposite way. One reasonable explanation is that some parking spaces are restricted for students to use during certain times, so these spaces remain empty. We recommend optimizing the distribution of parking spaces in residential areas, as well as for on-street parking. For example, a website can be built to provide parking information. Residents can advertise their empty parking spaces for others who need to rent and they can find neighborhood parking information such as where they can park for free, what time a certain zones can park, and post the on-street meter information concerning time and prices. Residents can also fill out surveys on the website to make their own comments towards parking. Individuals could potentially post carpool supply and demand information. This website could also act as an information collection tool for the City of Ithaca Planning Department to determine which areas can relax restrictions for free parking and how changes can be made to on-street meters.

Another reason for students’ impression that there are not enough parking spaces in residential areas is that some parking spaces are underused. For example, some spaces can park 7 cars, but due to unclear marks, it often only park 5 cars. It is recommended that private lots be held to stricter regulations for clearly marking spaces that are owned or leased.

**Increase Access to Alternative Transportation**

**Local Public Transport Considerations**

Generally, route bus services in and out of Collegetown stop around 10:00 PM, 12:00 PM, and 2:00 AM depending on the route. Most service routes in and out of the city of Ithaca itself stop running around 10:00 PM. While this schedule may serve a majority of workers in Collegetown, the current schedule means that employees who work late at night, or who work overnight and early morning, are either unable to finish their shift responsibilities in order to catch a bus, or are unable to use public transportation to get
home. Moreover, employees living in Danby and Lansing cannot rely on public bus use for nontraditional hours, and must drive. Extended bus line service for these employees could increase accessibility and use of public transportation by employees, and limit complications for employers attempting to accommodate employee travel time needs. It is recommended that the city explore increased bus line service in two ways: first, in providing more late night buses, and second, increasing bus lines and frequency in and out of the towns surrounding the City of Ithaca. Increasing service would promote a more sustainable mode of transportation, and since employees typically need to park for significant portions of the day (length of shift), it would help to free up parking and increase car turnover in parking spaces.

Considerations for Traveling In and Out of Ithaca
It is also important to note that there are relatively limited options for traveling in and out of Ithaca. Aside from the Ithaca Tompkins Regional Airport, the major transportation hubs in the area are the Syracuse Hancock International Airport, and the Syracuse Amtrak station. While both the airport and Amtrak are great options for traveling out of Ithaca, it can often be difficult to find transportation to Syracuse, and access to these services often requires a car. Presently, there are very few routes that run between Ithaca and Syracuse. While the New York Trailways bus service advertises that they have limited routes from Ithaca to Syracuse, the information on these routes cannot be easily obtained from their website, so it is likely that most people are unaware of this option. Students have the option of the Cornell bus service to Syracuse, but this service is only in operation around Cornell’s fall, Thanksgiving, winter, and spring breaks. Students and residents do have the option to take a bus from the Ithaca Bus Terminal, however, many of the bus services only travel to cities en-route to New York City. Cornell is a diverse campus and many students are not from New York City, so the bus services to this region are not advantageous for many people. For those residents traveling in the direction of Washington, D.C. the trip involves nearly 10 hours or more on the bus and several transfers. The other bus option available to students is Cornell’s Campus-to-Campus (C2C) express bus service, which also only travels to New York City. If this service was expanded to include the Cornell in Washington program, part of the parking problem might be eliminated considering the number of students who often use their cars to travel to Washington D.C. for the Washington program, internships, interviews, conferences, and breaks.

Given these considerations, it is recommended that the City not only look at local bus systems, but also public or alternative transportation systems to major cities. Alternatives to long distance travel should especially be considered given the high proportion of residents who cited that traveling in and out of Ithaca as a key factor in their decision to bring/own a car in Ithaca. This may require either Cornell or the Ithaca Bus Station providing more routes to nearby cities such as New York City, Boston, Cleveland, Philadelphia, and Washington D.C. It may be useful to follow up with another study on where the residents of Collegetown go when they choose to leave Ithaca.

Biking Considerations
Several employees and students indicated that increased bike parking and bike racks are needed in Collegetown. Additionally, providing a bikeshare service may be beneficial to the area, and help decrease the need for cars. A bikeshare in Collegetown would mitigate instances of people choosing not to cycle due to the hill up to Collegetown by providing bicycles at the top of the hill. Biking would help make the Collegetown area and Cornell Campus more accessible without a car, and would decrease pedestrian’s commute time.

Public Awareness Considerations
Another recommendation is to increase awareness of alternative transportation methods in the Ithaca area, led by the city government. A public opinion campaign on alternative transportation methods could increase public transportation use and ensure that Collegetown residents are aware of their options. For example, Cornell students have discounted memberships with Ithaca Carshare, but most students
contacted in this study were unaware of that. Even TCAT has suggested the promotion of multi-modal transportation options, not just simply a dichotomy between bus and car.

A subject of great concern to many residents was the impression of unreasonable parking charges. This was one area of interest that involved many divergent views. Some residents felt that parking should be made more affordable by landlords, the parking garages, the City, and Cornell University, while others thought prices should be increased to create disincentives for residents having and operating cars in Collegetown. Students mainly requested lower parking fees, but landlords hold that the cost of building and maintaining a parking area is quite high. A public opinion campaign on the high cost of parking might help mitigate residents’ perceptions that parking is gratuitously expensive.

Ithaca currently has several social marketing campaigns, such as the successful “Read to Me” campaign. The city government could implement an awareness campaign about different public transportation options, such as Ithaca Carshare, as well as the safety of the bike paths. The City of Ithaca could develop awareness of Collegetown bus or bike routes, and hopefully help decrease the demand for parking spaces, and at the same time promote sustainable transportation.

Explore New Collaborations with Cornell University

**Additional Research on Cornell Student Parking**
Cornell has a variety of data on the students who choose to buy a Cornell parking permit, but no data on students who own cars without paying for parking on campus is recorded. Since other stakeholders believe it is these students parking off campus that contributes to parking congestion in Collegetown, more research needs to be done to better inform both the public and the city of the impact of student parkers. This would help determine how much of the parking shortage is student driven, which can influence city and campus policy moving forward. Cornell has specified its commitment to helping ease the parking issue, and it would also be a strong community relations opportunity for Cornell University to participate in such a study, because many stakeholders have intimated that they thought Cornell University should be doing more to help the issue. If Cornell was to have more substantial data on where students park their cars off campus, (as well as how many students do not have cars) and then made that data available to the public, this would have several fruitful effects. The first would be that the government and alternative transportation providers would have more information on the net increase of cars during the year and would be able to plan accordingly. This would also allow for other stakeholders to begin to look deeper into solving the problem, instead of scapegoating students, and allow real solutions to develop.

**Cornell University's SW Lot**
Many employers and employees have expressed frustration at the limited number of parking places in Collegetown, while noting that Cornell’s SW lot rarely reaches capacity. Some have suggested the possibility of exploring metered spaces or non-student parking passes within the lot to accommodate the parking demand within Collegetown and provide added revenue for Cornell.

**Concluding Remarks**
It is the hope of the Fall 2012 Domestic Capstone Team that this report will help inform improvements in parking policy and infrastructure in Collegetown. Many of the recommendations provided require additional research into which combinations of potential solutions are feasible and result in desired community outcomes. One particular important consideration for the Planning Department moving forward will be to determine what the main goal of Collegetown parking reform is: to free up spaces, or to increase revenues. Determining department and community goals will help the city move forward and begin to choose which parking policy strategies should be pursued and implemented.
Appendix A: Parking Inventory and Usage Study Assumptions, Advantages and Disadvantages

The following explanation details the assumptions, advantages, and disadvantages of the Parking Usage Team’s methodology. This information has been included to accurately document how parking inventory and usage numbers were derived, and so future studies have enough information to accurately compare results across studies.

Due to the limited time availability of researchers, the Parking Usage Team had to assume that a limited number of days would be able to provide a picture of the parking conditions in Collegetown. We had to assume the dates selected would be representative of regular weekday and weekend conditions. Second, we have to assume that weather has little effect on parking demand and usage, since we had little flexibility in changing the dates of our surveys. The third assumption is that the counting speed and efficiency are consistent between five researchers.

Compared with the 2000 study, most parts of the methodology are consistent and parallel (these parallel methods have already been stated in each section). However, we expanded our focus to the eastern residential area, instead of only the Collegetown Parking Overlay Zone, through which we could look at the Collegetown parking issue from a broader perspective. More importantly, the expansion of focus
should help us determine whether the spillover of parking from the CPOZ affects the outlying neighborhoods, specifically Belle Sherman. Through dividing the CPOZ into five smaller zones and using the range while estimating the off-street parking, our inventory and usage data became more accurate than that of the 2000 study in which the researchers highly depended on aerial photography in inventory survey. Many spaces were found during our counts that would have been missed from an aerial view.

As a counter-balance to the advantages listed above, our methods have a few drawbacks. The most significant drawback in the 2000 study, which still existed in our study, was the uncertainty of off-street parking estimation, especially in driveways and private garages. Illegal or inefficient parking could also be another source of errors. Even though the counting period has been shortened by dividing into smaller zones, there were still some cars leaving or parking during the counting period, which might add some biases to our result. This problem could be more salient in the license plate survey and residential overflow study, because each round of counting took more time. Compared with the 2000 study, the evening parking survey was not included. The change of parking usage in the evening was somewhat ignored in this study, since most of our surveys ended at 6 pm (we did parking usage counting in late night or early morning to capture overnight parking, but not the changes of parking usage from 6pm to 1am). Lastly the dates selected were according to our time availability, not randomly. Without flexibility in taking special events and weather into consideration, there could be some error or bias exiting. Since the surveys were conducted by five different people, the individual differences may also be worrisome in ensuring counts were consistent between researchers. But we believe the variation would be slight and not affect our results significantly (each one has their assigned zone and these assignments were maintained). To conclude, although the factors mentioned above may have influence on the research, they should not impose a major problem in our study.

Appendix B: Residential Survey

Hello Collegetown residents,

The Cornell Institute for Public Affairs is helping the City of Ithaca Department of Planning gather up-to-date information on parking in Collegetown. Would you please take 5 minutes to complete this survey? Thank you!

A. Personal Information
1. Are you a student? □ Yes □ No
2. How long have you lived in Collegetown?
   a) Less than 2 years b) 2-5 years c) 5-10 years d) More than 10 years
3. What type of home do you live in?
   a) Single-family b) Apartment (or Duplex) c) Complex
4. What is your address (not apartment number, just block number ex. 200 Dryden)? (This will not be used in any way to identify you or made available in the report or outside of this study. You do not need to identify exact house or apartment number.)
5. Occupation:  
6. Sex:  □F  □M  

B. Residents Information  
1. Please assess your opinion of the parking situation in Collegetown on a scale of 1-5.  
Least Inconvenient: 1  2  3  4  5  Most Inconvenient  

2. Please rate the main parking problems you observe in Collegetown on a scale of 1-5.  
   | Strongly Disagree | Strongly Agree |  
---|-------------------|---------------|  
1. Not enough parking spaces at residences | 1  2  3  4  5 |  
2. Not enough parking spaces on the street | 1  2  3  4  5 |  
3. Not enough parking spaces in the garages | 1  2  3  4  5 |  
4. Parking is too expensive at residences/garages | 1  2  3  4  5 |  
5. Too many students with cars | 1  2  3  4  5 |  
6. Unreasonable parking time arrangement | 1  2  3  4  5 |  
7. Others ______________________  ___________  

3. On a scale of 1-5, please rate which solutions you agree to help remedy the parking situation in Collegetown.  
   | Strongly Disagree | Strongly Agree |  
---|-------------------|---------------|  
1. House owners provide more parking spaces | 1  2  3  4  5 |  
2. Build another parking garage | 1  2  3  4  5 |  
3. Provide incentives to not own a car | 1  2  3  4  5 |  
4. Provide incentives to take public transportation | 1  2  3  4  5 |  
5. Others ________________________________  

4. How many people live in your apartment/house? (Circle below)  
0  1  2  3  4  5  6  7+  

5. How many people in your apartment/house are able to drive? (Circle below)  
6. Do you have a Carshare account or bus pass?  
a) Carshare  b) Bus Pass  c) Both  d) Neither  

7. What mode(s) of transportation do you use to get around and how often do you use each? (Check all that apply.)  
   □ Bicycle: □ Everyday  □ Every few days  □ Once a week  □ Once a month  □ Never  □ Other  
   □ Bus: □ Everyday  □ Every few days  □ Once a week  □ Once a month  □ Never  □ Other  
   □ Carpool: □ Everyday  □ Every few days  □ Once a week  □ Once a month  □ Never  □ Other  
   □ Walk: □ Everyday  □ Every few days  □ Once a week  □ Once a month  □ Never  □ Other  
   □ Carshare: □ Everyday  □ Every few days  □ Once a week  □ Once a month  □ Never  □ Other  

8. How many people in your apartment/house unit own a vehicle in Ithaca (yourself included)?  
0  1  2  3  4  5  6  7+ 

C. If you have a vehicle:  
NOTE: If you or no one in your unit family owns a car, skip to section D.  
1. Where do you park?  
a) On property  
b) Private lot  
c) City or private garage  
d) On a nearby street  
e) On-street outside Collegetown neighborhood
2. How much do you pay?
   a) On property □ No extra charge or _____/month
   b) Private lot _____/month
   c) City or private garage _____/month
   d) On a nearby street _____/month
   e) On-street outside Collegetown neighborhood _____/month
   f) Cornell University parking lot _____/month
   g) Other ______________________________

3. How often do you have a problem finding parking?
   a) On the street: □ Never □ Occasionally □ Often □ Always
   b) In the city garage: □ Never □ Occasionally □ Often □ Always

4. When do you have difficulty finding a parking space?

<table>
<thead>
<tr>
<th></th>
<th>6am-8am</th>
<th>8am-2pm</th>
<th>12pm-4pm</th>
<th>4pm-8pm</th>
<th>8pm-12am</th>
<th>2am-6am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekday (Mon-Fri.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekend (Sat-Sun.)</td>
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</tr>
</tbody>
</table>

5. How often do you use your vehicle?
   a) Everyday    b) Every few days    c) Once a week    d) Once a month

6. How long do you usually need to park your car in Collegetown?
   a) < 1 hour    b) 1-2 hours    c) 2-5 hours    d) > 5 hours    e) all day

7. For what purpose do you use your vehicle? (Check all that apply to you.)
   a) Go to campus
   b) Shopping
   c) Work
   d) Entertainment
   e) Drive in and out of Ithaca
   f) Household errands (i.e., using your vehicle to drive child to school)
   g) Other ______________________________

D. If you don’t have a vehicle:
1. Why don’t you have a vehicle? Check all that apply.
   a) No driver’s license
   b) Not enough parking spaces
   c) Parking fee is too expensive
   d) Parking time limits unreasonable
   e) Operating vehicle is too expensive
   f) More efficient to use local transit
   g) Other ______________________________
Completion and return of this survey implies consent to participate in this study. If you have any questions about this study, please contact Laurie Miller at 607-255-4858 or ljm44@cornell.edu.

Thank you for your time.

Appendix C: Residential Team Focus Group Notes

The following is a summary of responses gathered from four Collegetown residents during a focus group conducted in November 2012, as supplementary data to the quantitative Residential Survey.

1. Is there a parking problem?

- There are parking problems in some areas where on street public parking meters are unutilized. The private off-street parking works fine.
- A first-year student heard that parking on campus was free at certain times and in certain areas. The student had questions regarding if this was accurate, and which areas were free.
- Too many students living in Collegetown and bring too many cars. First-year students usually live on campus. For second year students, there is not enough housing on campus, and they are pushed into Collegetown.
- It is inconvenient to get in and out of Ithaca. A resident asked why they need a car if most students live near campus. The moderator responded that the main reasons are for shopping and getting in and out of Ithaca for breaks
2. If there are more amenities will that help? What Cornell can do better?

- Most students under junior year are too young to go to bars. There are not many recreational-driven activities like paintball and arcade games. There is a need for more diversity of businesses in Collegetown. This would help reduce car use.
- Collegetown is homogenous and overwhelmingly populated with students. In the past, there were more stores. There used to be a full service grocery store, but it went bankrupt. Most drug stores and shopping places have gone out of business. It’s important to be realistic about the current business environment.
- Wegmans should have a bus service. Transferring from downtown to Wegmans is difficult. Further research should be conducted as to what time periods residents need the bus the most.
- Only 30% of people from the East Coast use taxis. In Washington, there are zone taxis. Most students are used to cabs, but service is not well provided in Collegetown.
- Set a fixed taxi zone rate that can include Wegmans. Another problem of parking is cruising for a spot. It adds to congestion on traffic and parking illegally. One of the residents living on Dryden Ave. claimed that cruising for a spot is still a problem there. People claim there are no parking meters on Oak Ave.

3. How is parking in general?

- In lower Collegetown, one resident was typically able to find spots anywhere at any time in the past, but now have difficulty finding any empty spots. With the recession in 2009, not many cars were brought by undergrads to Collegetown. This resident started seeing too much free parking on the street and reasoned, “Why would people pay for a garage?”
- In upper and lower Collegetown, 50 percent of all students bring their cars and ask for different parking arrangements. Half to two-thirds of students ask for parking and actually park.
- Another issue is that buses are hard to move through College Ave. It may clear the congestion by reducing parking / residential permits. No free parking for staff, and employers makes them pay for parking.
- Employees in Collegetown usually move their cars to free spots, which is very inconvenient.

4. What do you like about the parking situation?

- Odd-even parking in the winter keeps the cars moving so they’re not sitting. It’s hard to figure out when to move, and residents need to pay attention to track the dates.
- There are not enough drop-off areas on campus. Sometimes residents have to put flashes on, or risk getting a ticket. Cornell has forgotten that, and seems to ignore the issue.
- Resident felt discouraged to walk give the infrastructure. There should be better sidewalks.
- Cornell seems to be slowly eliminated parking lots, and needs more parking on the periphery of campus. Cornell doesn’t want parking spaces because they want to maximize their land for landscape reason or other land-using purposes.
- There is a lot of illegal off-street parking, and parking enforcement is not effective.

5. Why did you choose to live in Collegetown or buy a property in Collegetown?

- Hired into a fraternity system that provides a property to live.
- Hard walking up the hill in winter.
There are more rental areas in Collegetown, and newer houses than what’s down the hill.
Husband was working for Cornell, easy to commute from Collegetown.
Living in Belle Sherman area is convenient to go work.
Growing up in Collegetown and used to live there. Especially for young families, who may feel isolating to be further from Collegetown.
A lot of fast food and Chinese food in Collegetown.
Students feel the need to maintain a certain life style.

6. How is the Bus Service in Collegetown?

Bus # 10 goes downtown every 10 minutes, but given the demand, it still needs to figure out a way of expanding hours of operation. If buses could ride more frequently in the evenings, restaurants would benefit from it. Between Collegetown and downtown buses come less frequently. There should be an evening bus #10.

7. What other modes of transportation do you use? Why do you use them? Why not?

Resident would use a bike, but there are few bike racks to lock it up.
Business managers, not the city, place bike racks.
There are not enough transitions for bike riders between campus buildings; “you have to carry the bike up the stairs, there are no bike roads.”
Staff is asked not to bring bikes because racks are reserved for students.
Resident mostly uses TCAT bus.

7.1 Why don’t you use them?

Resident has lived car–free in the past, and “biking is a health benefit”
A resident witnessed an accident between a bike and a bus, and feels discouraged to ride a bike. Streets are not necessarily bike friendly. Cornell has a lot of old infrastructures.
Cornell could create new pathways into the city with trees and sidewalks. College Avenue could be a great open street.
Need for better transportation connections between areas on campus and between Cornell and Collegetown.
It is dangerous to bike in Collegetown because of narrow streets.
Bikes don’t have lights; bike riders need a helmet; riding a bike on tight streets is dangerous.

8. What solutions can you offer?

A Taxi station in Collegetown.
Wegmans Express
With online social media, there are cultural shifts with today’s students. Promote online shopping.
With the closing of Palms, there should be more social spots to congregate.
Reduce costs associated with car except for parking.
In NYC there is a parking garage with rental cars. In Collegetown, this could be a way the garage can pay itself because it offers a service.
Follow up with students. Continue researching where they would realistically park their cars.
• Analyze off-street parking requirement. Do we really need it? What happens if students show up with their car? Where will they realistically park it?
• Increase visibility and knowledge of on-street parking, particularly in blocks where many senior citizens live.
• On Ithaca Road, on-street parking is very limited, so friends and family members can’t park there and it affects residents’ lives.
• Increase free parking in and reduce the price for permits on campus for undergraduates.
• Offer day passes for parking off campus.
• Build recreation ways to connect East Hill and South Hill.

9. Final thoughts
R1: Plenty of spots are not being utilized correctly. A taxi stand is a great idea.
R2: Bring this idea to the Transportation Center: there is no bus service to East Hill plaza for athletic fields.
R3: TCAT needs additional shuttle service to East Hill Plaza. All the people that come to clean up the place need to be there at 5am. For children living in Enfield, there is no bus for after-school activities. TCAT needs to provide more service to other parts of the town.
R4: Conduct more research on what to do when cars do come, and provide more information about where people can park. Perhaps create a public map that shows available parking.

Appendix D: Business Owner/Manager Survey

Owner/Manager Survey
1. What is the address of the establishment? 2. Name of the business
5. What type of business:
   a. Restaurant/Eatery/Bar  b. Retail  c. Service
d. Apartment/Rental Agency  e. University  f. Other_______________
6. Does the establishment have any private parking associated with it? Yes No
7. If you provide private parking, how many of them are for:
8. Do you pay a fee for the parking? Yes No
9. If there is a fee, how much of it is for:
   a. Owner/Manager?_____  b. Employees? ______
10. Is there a peak in parking? Yes No
11. If so, what are the peak periods during the week?
   Sun.
### 12. Do you receive any deliveries?  Yes  No

### 13. If so, how often do you usually receive them?
- □ Daily- ___times a day (1-10)
- □ Weekly- ___times a week (1-10)
- □ Monthly- ___times a month (1-10)

### 14. What time do you usually receive them?
- □ Early Morning (before 8am)
- □ Morning (8am-noon)
- □ Mid-day (noon-4pm)
- □ Evening (4pm-8pm)
- □ Night (after 8pm)

### 15. Have you experienced any problems with deliveries?  Yes  No

### 16. If you choose “Yes”, please rate each item below on its significance to your business.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Insignificant</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>No space for trucks to park</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loading zones are too small for the trucks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loading zones not convenient for property</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traffic inhibits deliveries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (Please specify)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 17. Would you be willing to pay a premium to coordinate business deliveries in Collegetown?  Yes  No

### 18. Would you be supportive of time restrictions on deliveries in Collegetown?  Yes  No

### 19. If such restrictions were put in place, what times and frequencies would meet your needs?

<table>
<thead>
<tr>
<th>Time of Day</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Early Morning (before 8am)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Morning (8am-noon)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Mid-day (noon-4pm)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Evening (4pm-8pm)</td>
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<tr>
<td>e. Night (after 8pm)</td>
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<td></td>
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<tr>
<td>f. Variable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 20. Do you feel the parking needs of your customers are being met?  Yes  No

### 21. If you feel that there is a parking problem in Collegetown, what do you see as the main causes? Please rate each item.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Insignificant</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Too many residents with cars</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not enough parking spaces in the garages</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parking is too expensive at residences/garage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transit service is inadequate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unreasonable parking time arrangement</td>
<td></td>
<td></td>
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<tr>
<td>Lack of parking enforcement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
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</tr>
</tbody>
</table>

### 22. Please rate each of the solutions on the extent you would recommend to help remedy the parking situation

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23. Would you be interested in participating in a consortium to provide a TCAT bus pass or other alternative mode of transportation to your employees, such as Ithaca Carshare and/or Bikeshare (the cost of which is tax deductible to you and tax free to the employee)?

Yes    No

24. Please provide your additional comments, suggestions, or particular concerns with parking that you would like us to be aware of. Please write them on this page or on another page attached to this one.

Appendix E: Employee Survey

Employee Survey
1. What is your work address?    2. Name of the business
3. Are you a full-time employee?  Yes__ No__
4. How many days of the week do you work on a weekday? Please choose a number from 0 to 5 ______
5. What is your usual work schedule?
   Typical Start ____a.m./p.m.   End ____a.m./p.m.
6. How many days do you work on a weekend? Please choose a number from 0 to 2 ______
7. What is your usual work schedule?
   Typical Start ____a.m./p.m.   End ____a.m./p.m.
8. How often do you commute to work by the following means?

<table>
<thead>
<tr>
<th></th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Drive myself</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. Get a ride from someone</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c. Take public transit</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>d. Walk</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
e. Bicycle □ □ □ □ □
f. Other (specify)___________________ □ □ □ □ □

WHEN YOU DRIVE YOURSELF TO WORK...

9. How often do you park at...?
   Seldom  Sometimes  Often  Very Often
   a. Private/Off-street parking □ □ □ □
   b. Metered, on-street parking □ □ □ □
   c. Free, on-street parking □ □ □ □
   d. Dryden Road Garage □ □ □ □
   e. Other (specify)___________________ □ □ □ □ □

10. If you park at Dryden Road Garage, do you have a pass to it?  Yes ____  No_____

11. Do you find it easy to locate a parking spot?  Yes ____  No_____

12. How many minutes does it usually take to walk from parking to workplace? ______

13. How much do you spend on work-related parking?  $_____/month

14. This amount is how much of your total parking cost:  0-30%  30-70%  70-100%

WHEN YOU DO NOT CHOOSE PUBLIC TRANSIT...

15. Please indicate the top 3 reasons for not using it. (“1” indicates the most prominent reason and “3” the least important of the three.)
   __ Live too far from a route  __ Need a car for work
   __ Buses are too slow  __ Need a car for non-work related trips
   __ Bus schedule doesn't coincide with my work schedule  __ I prefer walking/biking for healthy lifestyle, cost concerns, etc.
   __ Buses are too infrequent  __ I prefer driving after balancing cost and benefit
   __ Buses are not on time  __ I prefer driving and cost is not a big concern

16. Would you choose traveling to work by bus if your employer covered the cost?  Yes__ No__

17. Would you consider a car share program as a solution to work commute?  Yes__ No__

18. Would you consider a bikeshare program as a solution to work commute?  Yes__ No__

19. Please provide your additional comments, suggestions, or particular concerns with parking that you would like us to be aware of. Please write them on the back of this page or on another page attached to this one.

Appendix F: Stakeholder Interview List

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Organization</th>
<th>Name</th>
<th>Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Leaders</td>
<td>Tompkins County Chamber of Commerce</td>
<td>Jean McPheeters</td>
<td>Ithaca Journal Archive</td>
</tr>
<tr>
<td>Cornell University</td>
<td>Cornell University Transportation</td>
<td>David Leib</td>
<td>Megan Wilson</td>
</tr>
<tr>
<td></td>
<td>(Former)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cornell University</td>
<td>Cornell University Commuter Parking</td>
<td>Helen Steh</td>
<td>Megan Wilson</td>
</tr>
<tr>
<td>Cornell University</td>
<td>Cornell University Transportations</td>
<td>Tanya Husick</td>
<td>Helen Steh</td>
</tr>
<tr>
<td>Cornell University</td>
<td>Government and Community Relations</td>
<td>Gary Stewart</td>
<td>Megan Wilson</td>
</tr>
<tr>
<td>Developers</td>
<td>Collegetown</td>
<td>Josh Lower</td>
<td>Team</td>
</tr>
<tr>
<td>Developer Questions</td>
<td></td>
<td></td>
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<tr>
<td>---------------------</td>
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</tr>
</tbody>
</table>
| Do you think there is a parking issue in Collegetown?  
| How do you feel about the policy in 2000? Supportive or not?  
| How many tenants do you have? Are they all Cornell students?  
| What percentage needs parking space?  
| How much do you charge for the parking spots? Are they usually filled up?  
| By what percentage is it filled by the tenants? If there is any left, how would deal with them?  

Appendix G: Stakeholder Interview Questions

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Developers</th>
<th>Brainstorm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rentals</td>
<td>Lambrou Real Estate</td>
<td>Nick Lambrou</td>
</tr>
<tr>
<td>Developers</td>
<td>Student Rentals</td>
<td>George Avramis</td>
</tr>
<tr>
<td>Developers</td>
<td>Ithaca Renting Company</td>
<td>Jason Mars, Sharon Mars</td>
</tr>
<tr>
<td>Developers</td>
<td>Novarr-MacKesey Construction</td>
<td>John Novarr</td>
</tr>
<tr>
<td>Alternative Transportation Providers</td>
<td>TCAT</td>
<td>Doug Swarts</td>
</tr>
<tr>
<td>Alternative Transportation Providers</td>
<td>Ithaca Carshare</td>
<td>Jennifer Dotson</td>
</tr>
<tr>
<td>Alternative Transportation Providers</td>
<td>Tompkins County Climate Protection Initiative</td>
<td>Peter Bardadiglio</td>
</tr>
<tr>
<td>Government</td>
<td>Mayor</td>
<td>Svante Myrick</td>
</tr>
<tr>
<td>Resident of Adjoining neighborhood/government</td>
<td>Common Council Member/Resident of Adjoining Neighborhood</td>
<td>Ellen McCollister</td>
</tr>
<tr>
<td>Government</td>
<td>Common Council Members</td>
<td>Graham Kerslick, Jennifer Dotson</td>
</tr>
<tr>
<td>Residents</td>
<td>Collegetown Student Council</td>
<td>Eric Silverberg</td>
</tr>
<tr>
<td>Residents</td>
<td>Collegetown Neighborhood Council</td>
<td>Various</td>
</tr>
<tr>
<td><strong>Alternative Transport</strong></td>
<td>□ What suggestions do you have for the parking policy in college town?</td>
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<td>--------------------------</td>
<td>---------------------------------------------------------------------</td>
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<tr>
<td></td>
<td>□ Are there any plans in progress that would affect service to and through Collegetown?</td>
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<td></td>
<td>□ What are the constraints to any call for enhanced service through the area?</td>
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<tr>
<td></td>
<td>□ Do you have any suggestions for improving the congestion in Collegetown?</td>
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<tr>
<td><strong>Environmentalists</strong></td>
<td>□ Do you think there is a parking shortage or a perceived parking shortage?</td>
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<tr>
<td></td>
<td>□ What alternative transportation options are the most viable for Collegetown?</td>
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<tr>
<td></td>
<td>□ What do you think the biggest problem with Collegetown parking is?</td>
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<tr>
<td></td>
<td>□ Which of the city's proposals do you think would make the greatest impact and why?</td>
<td></td>
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<tr>
<td><strong>Business Leaders</strong></td>
<td>□ Overview of the issue?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ How does this affect the business community?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ How has this affected bringing business to Ithaca?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ What initiatives would the business community favor?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ How is the relationship between the business community and Cornell?</td>
<td></td>
</tr>
<tr>
<td><strong>Residents</strong></td>
<td>□ What do you think is the biggest problem in terms of parking in Collegetown?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ How do you think the problem could be fixed?</td>
<td></td>
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<tr>
<td></td>
<td>□ Do you think we can manage parking service better without building more parking lots? Then how do you think we can do that?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ What do you think is the problem facing only by students who parking their car in Collegetown?</td>
<td></td>
</tr>
<tr>
<td>In terms of Cornell students who have a car and live in Collegetown, what’s your/their biggest concern?</td>
<td></td>
<td></td>
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<tr>
<td>---</td>
<td></td>
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</tr>
<tr>
<td>Do you have any suggestion in terms of solving the problem?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is there any parking policy (restrictions or service fee etc.) change in Collegetown during the time you live there? Does it work? Why or why not?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Government**

<table>
<thead>
<tr>
<th>What is the significance of the parking situation to the plans to develop Collegetown?</th>
</tr>
</thead>
<tbody>
<tr>
<td>What are your hopes for development, and how will the results of this survey impact your plans?</td>
</tr>
<tr>
<td>Do you believe that there is a parking problem?</td>
</tr>
<tr>
<td>What proposals are currently under consideration or investigation that could impact parking in Collegetown?</td>
</tr>
</tbody>
</table>