Downtown Parking Study
City of Washington, NC

Submitted to:
Pamlico Business Resource Center
(On behalf of the City of Washington)

Submitted by:
Community and Regional Planning
East Carolina University

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Executive Summary

Initiated by Mr. Keith Hudson (Pamlico Business Resources Center), the Downtown Washington Parking Study was conducted by the students at the Community and Regional Planning program at East Carolina University, Greenville, NC, between January 10, 2022, and April 30, 2022. The Parking Study investigated: 1) the existing public parking capacity in the study area, 2) the current parking demands, 3) trip and parking behavior of downtown residents, merchants, government officers, and visitors, and 4) the parking solutions.

SITE The study focuses on the downtown, spanning Stewart Parkway to the south, 3rd Street to the north, Bridge Street to the west, and Bonner Street to the east.

DEMOGRAPHIC AND ECONOMIC BACKGROUND Beaufort County, where Washington sits as the county home, has a majority of White (72%). It is a home for the elderly, with approximately 40% of the age over 55. The specialty industries of the county are agriculture, construction, manufacturing, and public administration/other services. Over the recent five years, the county experienced significant growth in construction (50.8%) and finance and insurance/real estate (57.7%).

STAKEHOLDER MEETING During the stakeholder meeting, the study team identified several vital parking-related problems: influx peak during lunch and dinner hours, residents and merchants parking in front of the business, limited on-street parking availability, mixed feeling regarding the parking shortage, sidewalk connectivity, community people do not favor walking and biking as alternative modes of transportation. Stakeholders also shared the possible solutions the city may consider: two-hour parking limits on Main Street on-street parking, charging for public parking, construction of a new parking deck, additional public transit service, increased bike facilities to encourage residents, visible signage, promoting awareness of existing parking spaces, improving wayfinding, and converting under-utilized land to parking.

PARKING CONDITIONS Most observations were made during and near the lunch hours to understand the parking status during the busiest time. However, it should be noted that the data we present only represents the availability at a minimal time frame in February—a slow tourist season. We strongly recommend the city hire a consulting company or use technology to measure the availability of the parking lots at various times in a day, a week, and a month for a more accurate understanding.

Most parking lots are owned publicly with 8.37 acreages (721 parking spots), followed by privately owned (4.61 acreages, 157 parking spots), the county-owned (2.63 acreages, 169 parking spots), and the city-owned (1.05 acreages, 29 parking spots). The field study shows that all lots are not fully occupied. Public and private parking lots are pretty under-occupied with about 43% available. The capacity of the parking lots is challenging to estimate because some are not paved, have faded parking marks, or are not accessible. The study team further identifies sixteen under-utilized potential lots to be developed as public parking lots. The street parking in downtown Washington
is not consistent—not every street has street parking, and not every street parking has been stripped. Due to the ambiguity, people seem to park along any roads, which could cause additional problems. Other than Main Street, other streets seem to have no parking issues due to the seasonality.

Other than Main Street and Stewart Parkway, sidewalks are either non-exist or discontinued block by block. The narrow widths of the existing sidewalks were also observed. Besides Main Street and Stewart Parkway, streetlights are rarely enough; there are no facilities to promote bicycling or different types of active mobility.

SURVEYS  Four surveys were conducted with residents, merchants, visitors, and public officers. All surveys were created using Qualtrics—an online survey platform. To reach the target population, the resident survey was posted on social media; the visitor survey was on the Washington Tourism Development Authority (WTDA)’s Facebook and their monthly newsletter; the public officer survey was circulated via emails; the merchant survey was promoted using a flyer with the QR code.

The resident survey showed that most residents drove alone (71.0%) when they visited downtown. Over 90% reported visiting the downtown at least once a week, indicating frequent local traffic and parking demand. Visitation to downtown is consistent throughout the day and between weekdays and weekends. More than half of the respondents spend between 1 to 3 hours on activities such as dining, shopping, and water access. Residents showed that downtown parking was somewhat insufficient, not dramatically negative. Residents’ most heavily used parking lots were the public lot across the Courthouse and the large parking lot along the waterfront Stewart Parkway. When asked about the most difficult to find parking, residents reported the Courthouse and Waterfront public parking lots. Interestingly, the on-street parking along Main Street was also highly reported.

The merchant survey showed that no business offers designated parking for customers. About 71.4% of merchants (and their staff) reported that they park in public parking lots, and only 14.2% used the street parking lot near their businesses. We asked if they think their customers experience parking problems. Twelve respondents (70%) said that the customers experience parking problems, and 6 of them feel that it happens constantly.

Visitors mainly were from eastern NC (75.6%) who drove to downtown Washington. Among 90 visitors, only five reported staying at a hotel located on the city’s edge. The purpose of the visit was tourist-related, such as shopping, dining, and the waterfront. Like in the resident survey, visitors also utilized the public parking lots across the Courthouse and the waterfront. Street parking was rarely mentioned except the one on Main Street. Visitors experienced difficulties finding parking, with approximately 40% indicating “very difficult.” Visitors rated the availability and quality of parking and signage/direction poorly. Sidewalk and lighting were evaluated highly, which we suspect they answered based on their experience on Main Street.

The public officer survey showed that they did not have difficulties finding parking in the
meeting, they also revealed misconceptions about others. For example, the street parking shortages were not due to the merchants parking in front of the business but due to the need for street parking and the lack of proper management—i.e., no street stripping and adequate signage. The surveys confirmed that all community members—residents, merchants, and public officers—were reluctant to change their parking-related behaviors. Interestingly, parking seemed to be heavily concentrated in the two large public parking lots and the street parking on Main Street. The data suggests actions for consideration.

**RECOMMENDATIONS** This study suggests 16 recommendation items. Although we suggest them as individual items, we suggest the city consider combining them together for efficiency and more tremendous success.

1. **Signage on a parking lot:** The signage related to the parking areas across downtown needs to be updated to assist people coming downtown in finding available parking and how to get where they want to go. We recommend enlarging the size of the existing signs and ensuring they are visible from all approach angles to the public parking areas. We also recommend creating a map across the downtown area that shows all available public parking facilities and their respective distance from each other.

2. **Maintenance of surface parking lot:** The City of Washington has many public parking areas within the downtown area, which lack proper supervision and thus require attention. Parking lot restriping will...
also be needed to increase the organization of parked cars and allow more vehicles to be parked.

3. **More public parking lots**: The city must utilize additional parking within the downtown area. This study identified 16 underutilized parcels that could be used as additional parking.

4. **Designated parking**: The city may establish designated parking. The designated parking can be much more effective if the city implements the paid parking system and the employers/the city government offers incentives for its employees, the officers, and the residents. The city’s stricter parking enforcement is crucial for designated parking spaces. Signs must indicate that the designated areas require permits for employees, government officers, and nearby residents/apartment tenants.

5. **A road diet on 2nd Street**: We believe the 2nd Street--parallel to Main Street and only a block away--has great potential to provide more street parking. We recommend changing the traffic pattern of 2nd Street, converting it from a two-lane to a one-lane road. The road diet will create space for angled street parking on one side of the street, which will create many more street parking capacities.

6. **Street parking redo**: We recommend increasing signage in places and clearly striping the street parking spaces. Street striping will improve traffic flow and prevents vehicular accidents, help the city comply with ADA regulations, maximize the number of parking spaces, and provide more curb appeal. Another recommendation for its street parking is converting sections of parallel spaces to back-in angle parking.

7. **Wayfinding in the city**: This report recommends installing a series of detailed wayfinding maps at critical points downtown. Each wayfinding map should indicate the estimated walking time to destinations from their respective location. This study also recommends including the QR code on the physical wayfinding maps as a supplemental resource.

8. **Real-time mobile parking app**: There is currently app technology that exists and allows people to find parking in real-time, reserve their parking spots, and even pay on a mobile device.

9. **Alternative transportation connecting hotels**: Hotels can create a shuttle service to transport visitors from the hotels to the downtown area. Hotels might consider undertaking a shuttle service feasibility study if this option is viable.

10. **Sidewalk upgrades**: Some of the sidewalks outside Main Street could be repaired or redone to help create an enjoyable walkable environment. Another recommendation would be to extend the width of the sidewalks.

11. **Street lighting**: Quality street lighting will help define a positive urban character and support the area’s nighttime activities, which is critical for traffic safety and pedestrian safety and security.

12. **Improving walkability**: The study suggests urban design tactics for more walkable communities. In addition to urban
design, citizen education can also be an effective way for the city to highlight the physical and mental health, equity, and social benefits of walking, less demand for automobiles, economic development, and enjoyment. Effective promotion should also be considered.

13. **Adding bicycle facilities**: There are no bicycle facilities or amenities for cyclists within the study area. This study recommends facilities that promote bicycle traffic as they are easier to use to get around the town than driving.

14. **Fee parking**: The study found that people in Washington—residents, merchants, and public offers—are unlikely to change their parking behaviors. One suggestion would be to require drivers to pay to park in these high-demand areas while allowing free parking in more distant perimeter lots. Considering that, on the whole, there is adequate parking supply in downtown Washington, the city would do well to disincentivize parking in the highest-demand areas and disperse the need for parking out to areas where there is an adequate supply. In addition, we also suggest the city consider a flexible parking cost technique: higher fees for times of the day when demand is greater would likely help disperse demand to other lots and should be considered. Some lots will need a limited number of designated spaces. When coupled with good wayfinding and pedestrian infrastructure, requiring payment for parking will allow for a more even distribution of parking demand, eliminating much of the “shortage” of parking in downtown Washington.

15. **Parking enforcement**: Having parking patrols in downtown Washington could solve or significantly reduce those issues. With fee parking and designated parking for employees, public officers, and residents enforced, parking enforcement will be much more effective. The addition of parking enforcement would create revenue for the city.

16. **Parking deck**: The research team suggests that Washington does not need a parking deck. A parking deck is economically unfeasible for the city. Instead, we suggest several practical and cost-effective recommendations to implement, including the ones mentioned in this study’s recommendation sections.
CHAPTER 1

STUDY AREA
Commonly known as the “Original Washington” or “Little Washington” to distinguish it from the nation’s capital, Washington, D.C., Washington, North Carolina is the county seat of Beaufort County and is located on the northern bank of the Pamlico River. As of the 2020 U.S. Census, Washington, N.C., has a population of 9,875.

This Downtown Washington Parking Study focuses on the downtown, which spans Stewart Parkway to the south, 3rd Street to the north, Bridge Street to the west, and Bonner Street to the east.
Beaufort County Demographic Analysis

Beaufort County is located in Eastern North Carolina within the coastal plain. Beaufort county is the 6th largest county in N.C., spanning 827.19 miles. The population of Beaufort County in 2021 is 44,468 (U.S. Census Bureau, 2020a). The population has decreased by 6.5%, or 3,107 individuals, since 2010. Females make up 52.5% of the population. Beaufort County is a majority White population; whites make up 72% of the population within the county (Chart 1). Hispanics are 8% of the current population (Hispanics may be of any race, they are included in applicable race categories) (U.S. Census Bureau, 2020a).

Beaufort County has a large population of people over the age of 65 (24.6%) and people under the age of 18 (19.8%), leaving 26,503 of the working population (Chart 2) (U.S. Census Bureau, 2020b). Beaufort County has a veteran population of 3,100, making up 3.3% of the population. 11.5% of individuals under the age of 65 in 2020 have a disability (U.S. Census Bureau, 2020a).

The median household income in Beaufort County is $48,501; the county also has a poverty rate of 18.1, which is higher than the state poverty level of 12.9%. Beaufort County had total employment of 12,997 workers in 2019; work from 2018-2019 has also dropped by 2%. The mean travel time for Beaufort County workers is 23.9 minutes. Beaufort County has a high school graduation rate of 88.3%, with only 20.7% completing a bachelor’s degree. Only 85.8% of the population has a household computer, while only 74% have an internet subscription (U.S. Census, 2020a).

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Beaufort County Economic Analysis

Table 1 shows an economic analysis for Washington, North Carolina. It includes the major sectors of employment in 2020 within Beaufort County and the changes in employment in the recent 5 years (between 2015 and 2020).

The largest employment sector in Beaufort County in 2020 is the educational services / health care and social assistance with 4,754 employees (24.2%), followed by Manufacturing (13.9%) and Construction (10.2%). The location quotient (LQ) analysis suggests that Beaufort County’s industrial specializations relative to the nation are agriculture, construction, manufacturing, and public administration and other services. The fourth and fifth columns show the number and percent change in employment between 2015 and 2020. The analysis show significant growth in Construction (50.8%), Finance and insurance/real estate (57.7%), while show a substantial loss in the agriculture (-37.4%), information (-36.2%), and wholesale industries (-34.6%).


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<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Agriculture, forestry, fishing and hunting, / mining</td>
<td>773</td>
<td>3.9%</td>
<td>2.30</td>
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<tr>
<td>Construction</td>
<td>2,004</td>
<td>10.2%</td>
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<tr>
<td>Manufacturing</td>
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<td>Wholesale trade</td>
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<tr>
<td>Retail trade</td>
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<td>Transportation and warehousing, and utilities</td>
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<tr>
<td>Information</td>
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<tr>
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<td>0.60</td>
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<tr>
<td>Educational services / health care and social assistance</td>
<td>4,754</td>
<td>24.2%</td>
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<tr>
<td>Arts, entertainment, and recreation / accommodation and food services</td>
<td>1,463</td>
<td>7.4%</td>
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</tr>
<tr>
<td>Other services, except public administration</td>
<td>1,414</td>
<td>7.2%</td>
<td>1.49</td>
</tr>
<tr>
<td>Public administration (industries not classified)</td>
<td>1,215</td>
<td>6.2%</td>
<td>1.32</td>
</tr>
<tr>
<td>Civilian employed population 16 years and over (Total)</td>
<td>19,680</td>
<td>100%</td>
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</table>
The first English explorers visited the area that would become Washington as early as 1585. The first settlements appeared in the 1690s. Washington appeared in the 1770s, when James Bonner created a town on his farm. Washington was given its name in 1776 in honor of General George Washington. This makes the Original Washington the first town to be named after our first president. After the War for Independence, Washington was an important cultural and commercial center because of its location near waterways. The town had to recover from two major fires during the Civil War.

In 1969, Washington started a renovation project and began the construction of Stewart Parkway. Stewart Parkway is a street and park that parallels the waterfront area. There are currently many restaurants, shops, and hotels that are near the Stewart Parkway area. In 2002, the City of Washington the Renaissance and Stormwater Management projects. These expanded pedestrian and boater access to the waterfront, enhanced traffic flow and parking, and created a stronger bond between the Historic District, the waterfront, and downtown.

Today, Washington remains the economic, recreational, cultural, and medical center of Beaufort County and several other counties surrounding counties.


Figure 1. Plan of the Town of Washington, NC, 1851 (Source: https://www.carolana.com/NC/Towns/Washington_NC.html)
The City of Washington do not have a true zoning layer that we could utilize in this study. Instead in the attribute table, property characteristics and land use were the closest resemblance. Maps in this section are based on the available data.

Much of the land use in the Downtown Washington study area is open space or undeveloped space. Commercial uses line Main Street, while single family residential exist on the outer edges of the study area.
2007 Parking Study Summary

In 2007, in collaboration with the Downtown Washington on the Waterfront organization (DWOW), the city of Washington prepared a study on parking conditions within the city's downtown area for the Washington City Council’s Parking Task Force, which was evaluating parking issues in the city. This study was undertaken with the stated objective of “develop[ing] a realistic parking plan based on a realistic assessment” and with the stated vision of making parking downtown “be an easy, enjoyable customer-oriented experience, offering convenience, service, and value to all users.”

Methods

Methods of collecting data employed included conducting surveys of public perception about parking issues in the downtown area with business owners, employees, and customers. A “parking supply inventory” survey and a count of occupancy of all parking areas both on- and off-street were conducted, as well as land use and square footage survey. Finally, current and future parking demand were estimated.

Findings

The inventory survey found that downtown Washington had a total of 1,881 parking spaces, with 407 being on-street and 1,474 being off-street. Calculated estimates of parking demand indicated there would be an average surplus of 665 parking spaces; however, when actual on-site counts were conducted, it was found that demand had been overestimated. Part of this is explained by the fact that many people patronizing downtown Washington businesses are already in the downtown area for other purposes when they patronize these businesses and that each time a business is patronized does not generally mean that a trip is taken, as the formula for calculating parking demand had assumed. Additionally, part of this may be explained by the fact that some employees and patrons of downtown businesses may park in spaces outside of the study area.

Overall, the study found that there was, in general, no overall shortage of parking. Although certain specific parking lots were filled close to capacity at certain points in time, public perception was the primary problem creating the parking “shortage” in downtown Washington. The study found that the overall average parking occupancy in downtown Washington was only 36 percent. This varied depending on the location of the lot as well as the time of day. According to a map of average parking occupancy throughout the day, street parking on Main Street, Market Street, and at the waterfront averaged 50 to 74 percent. On the east side of the block of Market Street between 2nd and 3rd Streets, occupancy exceeded 75 percent. Waterfront public parking lots average 25 to 49 percent occupancy throughout the day, while the lots in front of and behind the courthouse averaged 50 to 74 percent. Only two small, private off-street lots exceeded an average of 75 percent occupancy. Lots on the outskirts of the study area generally averaged less than 25 percent occupancy.

Off-street parking occupancy tended to be higher earlier in the week, tapering off throughout the week and reaching its lowest point on the weekend. On Saturdays, for example, occupancy tended to remain steady in the mid-20-percent range throughout the entire day. On weekdays, however, occupancy was higher in the mornings, slightly decreasing around lunchtime, increasing again between 3:00 and 5:00, and then decreasing sharply towards the end of the day (after 5:00 P.M.). On-street parking did not follow a pattern as strictly as off-street parking; however, it tended to somewhat mirror the pattern of off-street parking with relatively consistent levels averaging around 30 to 50 percent occupancy throughout the workday hours falling sharply after 5:00 P.M.

Lots along the waterfront tended to have peak occupancy around lunchtime, specifically between 12:00 and 2:00 P.M. The parking lot behind the courthouse (primarily for police officers and court workers) tended to peak between 9:00 and 11:00 A.M., while the public lot across 2nd Street from the courthouse remained close to full capacity the majority of the day, only beginning to empty out after 5:00 P.M. On-street parking followed a different pattern, with occupancy along the waterfront peaking around lunchtime; occupancy along Main Street being relatively low between 9:00 and 11:00, increasing around lunchtime, slightly
decreasing in the afternoons and then increasing again in the evenings; parking in front of the courthouse generally being higher in the mornings and then decreasing throughout the day; and parking on Market Street being higher in the afternoons between Main and 2nd Streets and being relatively consistent throughout the day between 2nd and 3rd Streets.

Future demand for parking capacity was calculated in two ways. First, demand based on the continuation of existing land use patterns determined that future demand would not warrant an increase in overall parking capacity in downtown Washington. Second, planned changes in land use and planned increases in the amount of retail space in downtown Washington were found to lead to a further increased demand for parking capacity that would necessitate an additional 449 parking spaces being added.

Recommendations

The study recommended that the city of Washington undertake several different initiatives as a result of its findings. First, it recommended that the city use several methods to manage the existing parking supply to utilize it better and make it easier for visitors to find unoccupied spaces. The first of these recommendations was to install a “comprehensive wayfinding system.” This wayfinding system would consist of signage clearly showing the location of each parking lot in the downtown area and showing drivers how to find each parking lot. The signs would also show who could and could not park in each lot. Signage for pedestrians was also recommended in order to guide visitors from off-street parking lots to businesses along the primary streets. Designated parking for employees and business owners was also recommended.

Additionally, it recommended that tenants of downtown apartment complexes be required to park in areas that would not block close access to the businesses in the same buildings as them. Another recommendation was to improve the alleys connecting parking lots closer to the courthouse to Main and Market Streets. These alleys should have clearly marked entrances and exits and should be made “safe, enticing, and enjoyable.” The report also recommended investigating whether bringing two-way traffic to the downtown’s one-way streets would encourage more patronage of businesses and improve pedestrian accessibility. Finally, “alternatives to parking” were encouraged, including pedestrian and bicycle access into downtown Washington from surrounding neighborhoods and perhaps operating a shuttle into the downtown area, especially during special events.

The report also encouraged establishing certain parking regulations, such as time limits on certain parking spaces. Some areas already had time limits posted, but there was no enforcement. The report recommended establishing enforcement mechanisms, including hiring parking enforcement personnel and levying fines on violators. The report also recommended evaluating the posted fines to ensure that they would be effective.

Combating misconceptions about the parking situation in Washington was another recommendation the report had for helping the city use its parking capacity more effectively. The installation of signage would help part of this, but making the report’s findings available and visible to the public was also strongly recommended. Adopting a “marketing theme” to inform the public about the availability of underused off-street parking was encouraged, and the report stated that this could
be done through the distribution of brochures or flyers discussing this information.

Finally, the report indicated that planning for future parking capacity needs should be done. This could be done, it said, by consolidating existing private lots into public lots; identifying locations where new parking infrastructure, such as surface lots or garages, could go in the future; establishing requirements for all new developments to include new parking capacity; by creating a “business service district” that could help fund services downtown businesses need, including services other than parking; and establishing a “parking authority” to help fund new parking improvements and attract grants. Since it was estimated that approximately 450 new parking spaces would be needed in the future, expansion of capacity would certainly be an important part of solving the parking problem in Washington and ensuring that no parking problems arise.

NC Main Street Center. (2007). Parking Study for Downtown Washington, NC.

The 2013-2023 Comprehensive Plan of Washington, NC utilizes the findings and recommendations from the 2007 Parking Study.
CHAPTER 3

STAKEHOLDER MEETING
Meeting Summary

A stakeholder meeting was held at the rooftop of the Mulberry House Brewery in Washington on January 26th, 2022. It was an opportunity for students to hear from the city’s stakeholders directly. Two questions were discussed: 1) identifying current parking problems in downtown, the areas, the causes, and the types of problems (when, by whom, how); 2) identifying potentials and opportunities while seeking parking solutions.

Parking Problems

As a popular destination for tourists (prominent during the spring and summer season), along with local, county, and state employees traveling in and out of the city, parking has become an issue for this waterfront community. Especially with an influx of people coming to Washington, N.C. for their local restaurants during peak lunch and dinner hours, many residents prefer to park directly in front of businesses rather than accessory parking lots, although there is minimal on-street parking availability downtown. This, in turn, directly affects individuals working in the city who struggle to find adequate parking. Significant demand for more parking has led a community to agree that this issue needs to be addressed hastily, while others proclaim that parking is sufficient. The problem stems from the city being labeled a “small town” and individuals not being able to park as close to their destination as possible.

Sidewalk connectivity and traffic were other issues discussed during the stakeholder meeting. An increase in tourism, flourishing downtown commercial, and institutional offices, and the construction of new residential properties close to downtown have negatively impacted traffic flow. As for the lack of sidewalk connectivity, some neighborhoods in the area either do not have sidewalks at all, or they lead to dead ends. Downtown sidewalks do not necessarily have similar characteristics to sidewalks in other portions of the surrounding area, leading residents to no other mode of transportation besides driving. Also, the community mindset doesn’t seem to favor walking and biking.

Figure 4. Photos from the stakeholder meeting
as alternate modes of transportation.

Opportunities

There were many solutions discussed during the charrette. While some solutions like 2-hour parking limits on the street spaces on Main Street, charging for public parking, constructing a parking garage, and offering public transportation were met with funding issues and community mentality, specific solutions were met with more consideration. For instance, improving bicycle accessibility in and around the city by adding features like bike lanes and trails could change the mentality of residents and encourage them to travel by bike rather than a motor vehicle. Installing a bike rental program and possibly putting restrictions on parking access downtown could incentivize residents to bike or walk, although the city could be met with complaints about parking. Another solution to resolve parking complaints could be creating visible signage and promoting awareness of existing parking spaces. Increasing the size, visibility, and simplicity (e.g., changing verbiage) of parking signage would allow users to be more aware of the location and availability of public parking. By installing user-friendly wayfinding maps of downtown Washington at each public parking lot, users can conceptualize how close they are from their destination, which could help change their perception of how “far” they are from their destination and may make them more receptive to not needing to park directly in front of their destination.

For Washington, N.C., to thrive economically, more parking availability is an essential factor to consider. Although there isn’t funding readily available to combat that issue, potential revenue through metered parking can help bring profit into the city but may not be welcomed right away with open arms by the local community. Culturally speaking, people will have to get used to the idea of walking slightly further to their destination if they want to see parking improvements. There also should be enforcements for hourly parking to make it fairer and more accessible for residents and tourists visiting the city. Over 500,000 square feet of unoccupied space in downtown could be transformed into more parking spaces—some of which could be used for handicapped parking, as there is a demand for that right now. Overall, Washington, N.C. needs to find that balance between economically growing and meeting the community’s needs. All begin with well-planned parking strategies.

Figure 5. Newspaper highlights from the stakeholder meeting (January 26, 2022) (source: https://www.thewashingtondailynews.com/2022/01/26/students-work-to-identify-downtown-parking-problems-solutions/)
Methods

The study team conducted the parking status in February 2022.

Students were asked to visit the assigned section to identify all parking lots; observe how each parking lot and street parking are used; count all available parking spots at when; measure the sidewalks, alley, and lighting. The form used for the field observation can be found in Appendix 1.

Most observations were done during and near the lunch hours--mostly between 11 AM and 2 PM--to understand the parking status during the busiest time (based on the stakeholder meeting results).

It should be noted that the data we present here only represents the availability at a very limited time frame. We strongly recommend the city hire a consulting company or use technology to measure the availability of the parking lots at various times in a day, a week, and a month for a more accurate understanding.
Parking Lot

Various groups own parking lots in the downtown area. Most parking lots are owned publicly with 8.37 acreages (721 parking spots). The 2nd largest parking lots are owned privately (4.61 acreages, 157 parking spots). Beaufort County owns 2.63 acreages of parking lots with about 169 parking spots. The City of Washington owns the smallest parking lots with 1.05 acreages (approximately 29 parking spots). The study team also identified potentially developable underutilized empty lots that can hold roughly 306 parking spots. All parking lots we counted for availability are marked in Map 4.

Please note that some parking lots are not paved, have faded parking marks, or are not accessible. Thus, the availability was occasionally measured with the best guess. Although four lots (PO11, PO13, PO14, and PR6) exist (accordingly marked on the map), calculations excluded them.

Data shows that all lots were not fully occupied. County parking lots were about 80% occupied on average when we observed. City parking lots were largely under-occupied (58.7%). Public and private parking lots were also pretty under-occupied, with about 43% available in both lots. With those potential lots (mostly located outskirts of the study area) of 62.5% availability, it is hard to say that the downtown had parking problems. However, readers should note that the field survey was conducted in February, a slow tourist season.

<table>
<thead>
<tr>
<th>Lot code</th>
<th>Available average</th>
</tr>
</thead>
<tbody>
<tr>
<td>CI1</td>
<td>57.8%</td>
</tr>
<tr>
<td>CI2</td>
<td>59.6%</td>
</tr>
<tr>
<td><strong>Total average</strong></td>
<td><strong>58.7%</strong></td>
</tr>
</tbody>
</table>

Table 2. Average available parking spots in the City-owned lots

<table>
<thead>
<tr>
<th>Lot code</th>
<th>Available average</th>
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</thead>
<tbody>
<tr>
<td>CO1</td>
<td>36.7%</td>
</tr>
<tr>
<td>CO2</td>
<td>16.9%</td>
</tr>
<tr>
<td>CO3</td>
<td>15.0%</td>
</tr>
<tr>
<td>CO4</td>
<td>12.5%</td>
</tr>
<tr>
<td>CO5</td>
<td>19.0%</td>
</tr>
<tr>
<td><strong>Total average</strong></td>
<td><strong>20.0%</strong></td>
</tr>
</tbody>
</table>

Table 3. Average available parking spots in the County-owned lots

<table>
<thead>
<tr>
<th>Lot code</th>
<th>Available average</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR1</td>
<td>16.7%</td>
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<tr>
<td>PR2</td>
<td>6.7%</td>
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<tr>
<td>PR3</td>
<td>11.1%</td>
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<tr>
<td>PR4</td>
<td>69.2%</td>
</tr>
<tr>
<td>PR5</td>
<td>42.6%</td>
</tr>
<tr>
<td>PR7</td>
<td>58.3%</td>
</tr>
<tr>
<td>PR8</td>
<td>30.0%</td>
</tr>
<tr>
<td>PR9</td>
<td>71.2%</td>
</tr>
<tr>
<td>PR10</td>
<td>83.8%</td>
</tr>
<tr>
<td><strong>Total average</strong></td>
<td><strong>43.3%</strong></td>
</tr>
</tbody>
</table>

Table 4. Average available parking spots in the privately-owned lots

<table>
<thead>
<tr>
<th>Lot code</th>
<th>Available average</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO1</td>
<td>47.5%</td>
</tr>
<tr>
<td>PO2</td>
<td>58.3%</td>
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<tr>
<td>PO3</td>
<td>58.3%</td>
</tr>
<tr>
<td>PO4</td>
<td>48.5%</td>
</tr>
<tr>
<td>PO5</td>
<td>56.7%</td>
</tr>
<tr>
<td>PO6</td>
<td>0.0%</td>
</tr>
<tr>
<td>PO7</td>
<td>64.0%</td>
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<tr>
<td>PO8</td>
<td>31.3%</td>
</tr>
<tr>
<td>PO9</td>
<td>96.3%</td>
</tr>
<tr>
<td>PO10</td>
<td>95.0%</td>
</tr>
<tr>
<td>PO12</td>
<td>70.6%</td>
</tr>
<tr>
<td>PO15</td>
<td>92.5%</td>
</tr>
<tr>
<td>PO16</td>
<td>93.6%</td>
</tr>
<tr>
<td><strong>Total average</strong></td>
<td><strong>62.5%</strong></td>
</tr>
</tbody>
</table>

Table 5. Average available parking spots in the publicly owned lots

<table>
<thead>
<tr>
<th>Lot code</th>
<th>Available average</th>
</tr>
</thead>
<tbody>
<tr>
<td>PU1</td>
<td>18.0%</td>
</tr>
<tr>
<td>PU2</td>
<td>8.8%</td>
</tr>
<tr>
<td>PU3</td>
<td>97.0%</td>
</tr>
<tr>
<td>PU4</td>
<td>85.6%</td>
</tr>
<tr>
<td>PU5</td>
<td>71.8%</td>
</tr>
<tr>
<td>PU6</td>
<td>44.4%</td>
</tr>
<tr>
<td>PU7</td>
<td>21.9%</td>
</tr>
<tr>
<td>PU8</td>
<td>14.9%</td>
</tr>
<tr>
<td>PU9</td>
<td>16.3%</td>
</tr>
<tr>
<td>PU10</td>
<td>22.1%</td>
</tr>
<tr>
<td>PU11</td>
<td>71.0%</td>
</tr>
<tr>
<td>PU12</td>
<td>53.2%</td>
</tr>
<tr>
<td><strong>Total average</strong></td>
<td><strong>43.8%</strong></td>
</tr>
</tbody>
</table>

Table 6. Average available parking spots in lots that the study team identified as potentially developable lots
Map 4: Downtown parking lots
Street Parkings

Map 5 below shows where street parking is marked and where people park regardless of parking marks on the street. Street parking is not consistent—not every street has street parking, and not every road has a parking spot painted (although there is a street parking sign along the street). It isn’t easy to measure how much parking is allowed or available on such roads. Due to the ambiguity, people seem to park along any streets as long as there is no restriction visible. Street parking along Main St is filled much highly while 2nd St. is not. The street parking along the 2nd St is allowed on both sides with no line painting.

Table 7 shows the parking availability on the street with parking paint (with clear street parking lines). Similar to the findings with the parking lot earlier, the downtown does not show a lack of street parking lots due to the seasonality.

Table 7. Average available parking spots on-street parking

<table>
<thead>
<tr>
<th>Street Code</th>
<th>Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>71.4%</td>
</tr>
<tr>
<td>O</td>
<td>51.1%</td>
</tr>
<tr>
<td>F</td>
<td>39.3%</td>
</tr>
<tr>
<td>Q</td>
<td>34.5%</td>
</tr>
<tr>
<td>P</td>
<td>33.8%</td>
</tr>
<tr>
<td>C</td>
<td>31.3%</td>
</tr>
<tr>
<td>B</td>
<td>28.9%</td>
</tr>
<tr>
<td>D</td>
<td>25.0%</td>
</tr>
<tr>
<td>J</td>
<td>21.4%</td>
</tr>
<tr>
<td>E</td>
<td>20.0%</td>
</tr>
<tr>
<td>T</td>
<td>20.0%</td>
</tr>
<tr>
<td><strong>Total average</strong></td>
<td><strong>34.2%</strong></td>
</tr>
</tbody>
</table>

Map 5. Downtown street parking
Sidewalks, Alleys, and Facilities

Sidewalks on Main Street and Stewart Parkway are wide and well-maintained. However, they do not exist or discontinue in other areas. The width of the existing sidewalks were often observed.

Alleys exist in some areas--mostly connecting Public Lot (PU2) to the Main Street. However, student observers mentioned that the street lights are rarely enough in most areas, which will limit activities in the evening. It was also noted that there is no facilities to promote active mobility--bicycle or scooter.

Map 6. Downtown sidewalks, alleys, and lighting conditions

Figure 7. Alley

Figure 8. Narrow sidewalk
Methods

Resident Survey
The survey inquired about when and where Downtown experiences the most traffic from residents. The survey consisted of 16 questions to gauge their parking/travel behavior, such as when residents are traveling Downtown, why they are traveling Downtown, what parking areas are the most heavily used, and whether they were willing to change their parking behavior under specific scenarios. The survey was created using Qualtrics online survey platform. Appendix 2 includes the resident questionnaire.

The resident survey took the voluntary response sampling technique. Residents filled out a survey questionnaire posted to various Facebook groups for Washington residents. The survey was active between March 18, 2022, and April 1, 2022 (15 days) and reached 212. Among them, 195 residents participated in the survey resulting 89.6% response rate. The findings are based on 190 responses who consented to share their answers.

Merchant Survey
The merchant survey asked 15 questions. Questions included the type and the size of the business, the busiest time in their businesses, the designated parking available for merchants and the customers, their parking/travel behavior, their perceptions on whether their customers have parking difficulty, and the problem impacts their businesses in addition to the same set questions regarding their willingness to change their parking behavior under specific scenarios. The survey was created using Qualtrics online survey platform. Appendix 3 includes the merchant questionnaire.

A team of students had door-to-door surveys with merchants in Downtown Washington on April 1st. Students handed a flyer with the QR code to the online survey to merchants to fill out the survey later. The survey was active from April 1st to April 16th.

A total of 18 responses were collected and analyzed. The sample size was small compared to other surveys in this study due to the small number of the total merchants available in the area.

Visitor Survey
The visitor survey asked about the purpose and frequency of the visit, their downtown parking and travel experience, perceived parking facilities availabilities, and whether they were willing to change their parking behavior under specific scenarios.

The visitor survey was posted on the Washington Tourism Development Authority (WTDA)’s Facebook page and included in their monthly newsletter, reaching 20,000 people. The survey was open from March 30 through April 2 on Qualtrics. A total of 108 responses were collected, but only 90 people indicated they were visitors included in the analysis. Appendix 4 consists of the survey questionnaire.

Public Officer Survey
The public officer survey was aimed at individuals working for public offices and commuting with a need to park in downtown Washington. A total of 64 public officers answered 17 questions.

The survey window to submit responses was from March 31, 2022, to April 10, 2022. Seventeen questions were asked, and the last leaving opportunity to add suggestions to enhance parking options. Appendix 5 includes public officer survey questionnaire.
Resident Survey

Respondents’ age
Participants of our survey are fairly evenly distributed across a wide range of age groups. Five age-range groups (25 – 34 yrs; 35 – 44 yrs; 45 – 54 yrs; 55 – 64 yrs; and 65 – 74 yrs) each received over 30 responses (92.4% of all responses).

How far do respondents live from Downtown
About 9.2% of respondents reside within the Downtown Washington study area. Approximately 30% of respondents live up to a mile away from Downtown Washington, about two-thirds of them within a quarter-mile distance from the Downtown. Over half of our survey participants live over two miles away from the study area. These results may indicate that, due to the increased distance between Downtown and primary residential areas, Washington residents must rely on cars when they travel the Downtown.

Transportation mode
The vast majority of respondents report private automobiles (drive alone) as their primary mode of transportation when visiting the Downtown Washington study area with 71.0%. Of the alternative modes listed, the second most common was walking (13.4%), followed by carpool or droffed off by someone (6.9%) and bicycle (3.9%). All other transportation modes such as Beaufort Area Transit System (BATS) bus, golf cart, or motocycle were rarely mentioned.

These responses emphasize the importance of a sufficient parking supply and indicate the challenge the City of Washington will face in changing community behavior in car-dependency.

How often respondents visit Downtown
Over 90% of survey participants report visiting Downtown Washington at least once a week, indicating frequent local traffic and parking demand. Over 55% of respondents visit four or more days per week. With such frequent visitors, a public campaign promoting walking or awareness of parking supply may relieve persistent perception of lacking parking.
When residents visit Downtown

Survey response indicates that demand for parking Downtown is roughly consistent when comparing weekends and weekdays, with slightly fewer trips occurring on weekends over weekdays among residents, 46.7% and 53.3%, respectively.

Visitation to Downtown Washington is generally somewhat consistent throughout the average day. Nearly 70% of respondents report visiting during lunchtime, the afternoon, or dinnertime. This data suggests increased interest in Downtown Washington, particularly the restaurants and other attractions.

Time spend in Downtown

Over 30% of participants report their average visit to Downtown lasting between one to two hours, indicating that nearly a third of trips are relatively short. One-fourth of all resident trips last for an extended duration of three or more hours.

Daily activities in Downtown

Results for daily activities performed by residents in the downtown area reveal that parking demand related to each activity is consistent on weekdays. Corroborating findings in the previous questions, dining, shopping, and water access activities spike on the weekend, therefore taking a more significant toll on parking availability on those days.
Downtown parking accessibility

As for the local perception of parking sufficiency, on a scale of 1 (very accessible) to 5 (very difficult), the average scale was 3.3, leaning on the side of parking insufficiency, but not dramatically. A total of 168 people responded to this question with a standard deviation of 1.25.

Parking Locations

The most heavily used parking lots are the public Courthouse lot and the large public lot along the river. These are the most prominent, most visible, and public lots, featuring the most signage indicating their availability. (Figure 6)

Results for the perception of parking difficulty differ slightly from the previous question. While the courthouse lot and the riverfront lot are still identified as lots with parking difficulties, this perception has reduced intensity. Significant in the previous question results, Main Street parking is noted here as perhaps the most challenging place to park (Figure 7). This difficulty is likely attributed to the fact that only limited on-street parking is available. This map indicates that residents attempting to access Main Street offices and services would prefer to park on Main Street, as it is closest to their destination.

* Respondents were asked to click anywhere on the map. The heatmaps (Figure 6 and Figure 7) represent the total clicks from blue to green to yellow to red, from fewer to more clicks.

Difficult Parking Time

Supplementing our findings earlier, the result reflects that demand for parking is highest during mealtimes or on the weekends—demand for parking peaks at these times.
Willingness for changes
We asked three questions to all survey participants about whether they were willing to change their parking behavior under specific scenarios. A Likert Scale with 1 being very likely and 5 being very unlikely was used in all three questions below.

Q1. How likely would you consider parking a few blocks away if you must pay for parking (parking meters, parking fee) downtown?
Overall, Washington residents are unwilling to pay for parking to access downtown. The average scale from 148 responses was 3.51, suggesting the optimum parking solution will not include charging for parking which will, according to these responses, significantly decrease interest and business conducted in downtown businesses.

Q2. How likely would you consider parking a few blocks away and walking, biking, or riding a shuttle to your building if bikes or shuttles would be provided?
Overall, Washington residents are unwilling to parking a few blocks away and use alternative transportation to access downtown. The average scale from 149 responses was 3.65, suggesting the optimum parking solution will not include alternative transportation.

Q3. How likely would you consider walking or bicycling if sidewalk improvements were provided?
Overall, Washington residents are slightly unwilling to walk or bike to access downtown even if sidewalk improvements were provided. The average scale from 130 responses was 3.11.
Merchant Survey

Business Types
The first question asked by this survey was, “What type of Business are you?”. 41% (7 out of 17) of respondents classified their business as a restaurant. The second most popular business type was retail, which made up 23% (4 out of 17) of responses.

Designated Parking
According to unanimous survey results (17 responses with 1 no response), there is no business in the downtown Washington area with designated parking for customers. There was no evidence for designated employee parking, with 71.4% of employees and business owners parking in public parking lots. Both street parking and “other” were tied at 14.2% of responses.

Small business
43% of businesses only employ 1-2 workers other than the business owner. The businesses that recorded 7 or more employees accounted for 7 out of 14 responses, the same amount of business that was self-reported as a restaurant.

Perceptions on customers experiencing parking programs
We asked two perception questions to merchants. The first one was if they believe customers experience parking problems when they visit their

Perceptions on the lack of parking affect their business

Chart 11. Merchant Survey: Designated parking
Chart 12. Merchant Survey: Perceptions on customers experiencing parking problems
Chart 13. Merchant Survey: Perceptions on lack of parking affect their business
12 people responded that the customers experience parking problems, especially six of them feel that it happens always.

Perceptions of the lack of parking affect their business
When we asked if they feel that the lack of enough parking affects their business, about a half did not answer the question. However, eight people answered: Sometimes (2 responses), Often times (3 responses), and Always (3 responses).

Mode of transportation
Most business owners in Downtown Washington drive alone to get around the downtown area. This majority accounts for 81% of survey responses. There were only 2 other modes of transportation that were used according to survey responses. These 2 modes were biking, which accounted for 12.5% of responses, and walking, which accounted for 6.2%.

Busiest Business days
The busiest time of day reported by respondents was the afternoon. This time of day is consistent across the whole week, becoming busier on Fridays and Saturdays. The busiest days were Friday and Saturday, with Saturday being reported as the busiest day for morning, afternoon, and evening. The least busy day was Sunday, although the busy afternoon time was unaffected.

Willingness for the changes
We asked the three willingness for the change questions to merchants as well. The majority of respondents are either somewhat unlikely or very unlikely to adopt the changes on all three questions.
Visitor Survey

Respondents

Among 107 survey respondents, only 83.3% (90 people) answered that they were visitors. The visitor survey results are based on those 90 visitors.

Most respondents (75.6%) were from Eastern North Carolina, followed by people from elsewhere in North Carolina (16.7%). Only 7.8% of respondents were from out of state. All respondents except five did not stay at a local hotel. A few people provided the name of the hotel at which they stayed. Each one is on the edge of the city with few options to get to downtown other than driving. It is understood that most visitors would probably drive to Washington rather than other transportation alternatives and are likely to use a parking facility in Downtown Washington.

Downtown Visit

Respondents were asked to pick any that pertained to them the purpose of the visit. There were a variety of reasons for people to come to downtown Washington. Most often cited were tourist-related draws such as shopping and dining (74 times) and the waterfront (60 times).

When asked how often respondents visit Downtown Washington, most respondents indicated that they come downtown regularly. 96.6% of respondents said they visit “often,” “sometimes,” or “very often,” with 31.0% saying very often.

Parking Experiences

All respondents indicated that they parked at a parking lot when they arrived in downtown Washington (100.0%).

When asked to pinpoint where they parked, we provided a map that led to the following heatmap. The heat map showed that most people parked in the waterfront parking lot and in front of the courthouse. The parking lots across city hall and the post office were rarely marked. Street parking was not often used other than on Main Street.
Parking Experience

Findings show that people had difficulties when trying to find parking while visiting downtown Washington. Approximately 40% of respondents indicated it was “very difficult” to find parking. Only about 27% of respondents found parking was either somewhat easy or very easy.

Facility availability and quality

We asked the availability and quality of transportation facilities in Downtown Washington such as, parking, signage and directions, sidewalks, and lighting. A 5-point Likert scale was used to gauge respondent’s perceptions on each item where 1 being extremely poor and 5 being very good.

The availability and quality of parking in downtown Washington was rated poorly by respondents (average rating of 2.85, between poor and neutral rank), which aligns with their view that it was not easy to find parking. Sidewalks received the highest with the average rating of 4.3 (between good and very good).

Willingness for changes

* Disclaimer. There were fewer respondents to questions in these sections of the survey for reasons unknown. The findings should not be over generalized due to its small responses.

Q1. Parking a few blocks away if you must pay for parking meters, parking fee) downtown?

Respondents were split over their willingness to park farther away if downtown parking was metered. Some would rather avoid being charged at all costs, while others either don’t care or do not believe parking should be metered to begin with. Findings suggest that people visiting Washington are reluctant to give up the convenience of parking close to their destination even if they must pay for parking.

Q2. Parking a few blocks away and walking, biking, or riding a shuttle to your building if bikes or shuttles would be provided?

Respondents were somewhat positive about the possibility of parking a few blocks away and walking, biking, or taking a shuttle if bikes or shuttles were provided.

Q3. Walking or bicycling if sidewalk improvements were provided?

When asked generally about walking and biking,
most respondents indicated they would be willing to consider these modes if facilities were provided to make them safer.

**How far would you willing to walk from your parking space**

Respondents were very willing to walk 1-3 blocks away from their parking space (65.5%). The willingness to walk diminishes greatly after three blocks away.

![Chart 22. Visitor survey: Visitors' willingness to walk further](image)

**Overall suggestions**

When asked for miscellaneous suggestions for parking improvements, respondents were split. Some indicated parking is challenging to find or would no longer come downtown if they had to pay for parking. In contrast, others said the situation is working well other than an inefficient use of parking by certain groups. A desire for more parking close to restaurants and shops, more accessible parking, and potentially a parking garage were also expressed.

However, there was a concern about who would be enforcing the permit system and the time limit. Many people mentioned not having a parking issue until an “event” happened. When an event occurs, they notice an increase in county vehicles in vital parking spots and an issue accessing accessible parking spots.

The survey’s overall findings were that there is a lack of parking in downtown Washington, that visitors are loathed to consider parking farther from their destination and using other modes to complete the journey, and that Washington is not yet ready for metered parking. When asked to pinpoint where they parked, a heatmap was created showing that most visitors park in the surface lots between Main Street and the riverfront. Still, the survey responses showed a willingness to use other modes of travel if they were made convenient and safe.
Public Officer Survey

Participants’ workplaces varied, which include Beaufort Co. Elections Board, Beaufort Co. Courthouse, Beaufort Co. Emergency Services, Beaufort Co. Finance Office, Beaufort Co. Inspections, Beaufort Co. Land Records, Beaufort Co. Register of Deeds, Beaufort Co. Sheriff’s Department, Beaufort Co. Tax Office, Beaufort Co. Water Department, Beaufort Co. District Attorney Office, City Hall, County Admin Building, Harwell Senior Center, Pamlico Business Center, Beaufort County (no department info given), and City of Washington (no department info given).

When asked their arrival time for work, the majority answered between 7:45 AM and 8:00 AM. Although their arrival times overlapped, participants answered that finding a parking space in the morning is easy. Only 1.85% of participants responded that parking at work was challenging. Most respondents reported that it usually takes less than a minute (79.63%) to find an open parking spot when they arrive. 18.52% answered 1-5 minutes, and 1.85% answered 5-10 minutes. No one reported more than 10 minutes finding a parking spot.

The parking seems to happen close to their workplace, with 75.93% reporting that they parked in the workplace parking lot. The rest (24.07%) mentioned that they parked one block away. Over 90% of respondents have a specific lot or street where they usually park.

We also asked if people drive or walk to lunch. Although 28.3% of respondents bring their lunch (no need to drive or walk), quite many answered that they drive for lunch (67.92%) while a small number of people (3.77%) walk. Those who drive were asked about the difficulty of finding a parking space when they return. The lunchtime parking seemed relatively difficult compared to their morning routine, with 40.0% reported somewhat or very difficult.

The survey did not find any particular day of the week or time of the year problematic for public officers finding their parking. When asked if court sessions affect their ability to find parking, a mixed response was recorded, with 45.28% answering “yes,” while a similar number of people (41.51%) answering “no.”
We asked respondents to mark the map provided to show where they usually park. The K parking lot, the closest one to the many public office buildings, was the most used. The County parking lots (D and C lots) are also used frequently.
CHAPTER 6

CASE STUDIES
Like the City of Washington, Manitou Springs, Colorado, is a small, historic community facing increased parking demand due to recent growth. To increase parking availability and ease traffic congestion, Manitou Springs has rolled out its #PositiveParking initiative, spearheaded by implementing progressive on-street parking rates. These tiered rates increase in price the longer a car remains parked. Because Manitou Springs is a resort town, its progressive, on-street parking administration is adapted according to the “on” season during summer and the “off” season during winter. Sacramento, California, has also successfully employed the progressive on-street parking fee method, reporting its contribution to taming and redistributing parking demand.

By adopting a similar tiered on-street paid parking system, the City of Washington can incentivize the use of free underutilized parking supply off of main corridors. The opportunity to calibrate the price according to the season would allow the City the flexibility to adjust the fee according to demand. According to resident survey responses, Washington’s Main Street is the most desirable place to park as well as the most difficult. To gauge community receptiveness to this method, the City may consider conducting a pilot progressive on-street paid parking project on Main Street first.


Watertown, MA

**POPULATION:** 35,401  
**METHOD:** PRONOUNCED SIGNAGE AND WAY-FINDING MAPS

In July 2019, Watertown, Massachusetts, a Boston suburb, adopted a comprehensive Parking Management Plan. One of the central components of the recommendations was to improve wayfinding and parking signage that would activate underutilized parking supply by encouraging frequent drivers, in particular, to use “remote” lots, freeing up “core” parking for customers and visitors. Watertown’s parking maps describe available parking resources and help visitors easily find the right parking. Since its implementation, Watertown has noted a significant decrease in complaints of parking unavailability.

While the City of Washington employs parking signage, these signs are not effectively placed to intercept and direct vehicles before they reach core areas and create traffic congestion. Additionally, the verbiage on the signs discourages drivers from using available spaces. A “NO UNAUTHORIZED PARKING” tag has been added to signs posted at premium spots. Though this notice is intended to target teenage loitering, it may confuse and deter legitimate visitors. By increasing the size and improving the placement of parking signage, the City of Washington can enhance the visibility and awareness of public parking.

Additionally, adding early, proactive signage directing drivers to available parking before they enter the Downtown area (for example, at the intersection of W Main St and Bridge St.) avoids leaving visitors frustrated when trying to find parking after entering the heart of Downtown.

Figure 18. Example of an effective public parking sign. The most successful signs notify users when a lot have available spaces.

New Bern, NC

**POPULATION:** 31,291 (2020)  
**METHOD:** METERED ON-STREET PARKING

In 2018, the city implemented 2-hour parking maximums for on-street parking and posted signs directing downtown visitors to nearby lots that provided unlimited free parking. The initiative was met with mixed feelings by residents, but the program remains in place today, suggesting some level of success. The main expenses associated with this recommendation are the cost of installing meters, wayfinding signage, and the cost of parking enforcement.

In response to increased congestion and traffic in the downtown historic New Bern, the city implemented a parking plan pairing two-hour parking limits in high traffic areas with increased wayfinding signs leading visitors to free, non-time-limited public parking adjacent to the downtown area. The parking plan includes a tiered fee system, with first-time offenders receiving a warning, and repeat offenders receiving a fine of $25/violation – with fines being raised to $50/violation if not paid within the specified period (Weatherington, New Bern Sun Journal). The new parking rules resulted in over 1,600 violations noted in the first year, and while some locals and visitors were deterred by the new parking program, others were unphased.


Figure 19. Example of metered on-street parking sign in New Bern, NC.
Lockport, IL

**POPULATION:** 25,307 (2019)

**METHOD:** VALET PARKING

Lockport is a small town in Illinois that had seen a downtown urban revival in the years leading up to the pandemic. As more businesses moved to the area, parking became an issue, and shoppers followed afterward. The parking issue soon turned into a congestion issue as much of the traffic downtown was attributed to “cruising” or cars actively looking for parking in the area.

Lockport decided to offer a city-funded valet program to solve the parking/congestion issue. The valet was deemed a perfect solution because it was a low-cost, no construction alternative to the parking issue. No garages needed to be built, and the program could be implemented very soon. During the COVID 19 pandemic, the city contracted VIP Valet Services to set up two valet stands in the downtown area.

The contract is worth $75,000, which is cheaper than a parking garage, as they mainly operate at a loss anyway. The valet operates Friday - Sunday during peak afternoon hours. The city has reported a noticeable decrease in downtown congestion, and many local shop owners thank the project for helping to sustain their businesses. The project was non-invasive and did not require construction or substantial funding.


![Figure 20. Valet parking](https://patch.com/illinois/homerglen-lockport/lockport-approves-75k-agreement-valet-services)
CHAPTER 7

RECOMMENDATIONS
R1. Signage on parking lot

The signage related to the parking areas across downtown needs to be updated to assist people coming downtown in finding available parking and how to get where they want to go. Currently, the signage is either too small, facing the wrong way, or does not exist where it needs to be. We recommend the installation of more prominent signs.

For example, the parking lot PU5 (Map 4) has a small sign and is only visible from one direction of travel; this can be problematic for visitors unfamiliar with the downtown area. We believe the existing color scheme of the current signage is appropriate and fits the downtown’s present aesthetic and other wayfinding signs.

We recommend enlarging the size of the existing signs and ensuring they are visible from all approach angles to the public parking areas. We also recommend creating a map across the downtown area that shows all available public parking facilities and their respective distance from each other. When a parking lot is packed to its capacity, the sign should guide the visitors to other parking locations. They should be visible to those driving downtown to be as accessible as possible.

[Note: This recommendation best works with R6: Wayfinding in the City.]

R2. Maintenance of surface parking lot

The City of Washington has many public parking areas within the downtown area, which lack proper maintenance and thus require attention. For example, the parking lot PU5 (Map 4) has issues concerning potholes, rough pavement, and poor parking lot striping. Repaving and striping the lot would increase the amount of lot usage. Parking lot restriping will also increase the organization of parked cars and allow more vehicles to be parked within the same lot compared to lots that aren’t sufficiently striped.

The City of Washington will need routine maintenance. The government should routinely check public parking lots for potholes and deterioration.

R3. More public parking lot

This recommendation presents utilizing additional parking within the downtown area. The team identified 16 underutilized parcels that could be used as additional parking from the field observations (see Map 4). Some lots, like PO12 - PO16, are already being paved that the city can quickly implement. Most of the lots are located in the study area--all of them are only within two to five blocks away from the core downtown/waterfront area. The

Figure 21. Parking lot PU5 on Map 4. This lot requires pavement, parking lot striping, and proper signage, as mentioned in R1 & R2. (Image source: Google Street View)
surveys with visitors found that most visitors currently park in the parking area on Stewart Parkway and across from the Court House. However, they are willing to walk one to three blocks (67%) or three to five blocks (17%). Five underutilized lots are within two blocks of the main downtown area, and the rest are within three to five blocks’ distance.

R4. Designated parking

The need to designate parking areas for officers, employees and residents has been frequently mentioned in the stakeholder meeting, surveys, and informal conversations. Some criticized employees for parking on the street where visitors and residents need to park to go shopping or eat. Others complained of public officers’ neglect in enforcement since they often over-occupied the public parking lots with the government vehicles. Others slated the apartment tenants since their cars sit in a parking lot for hours and days without turn-over. However, it is unfortunate that the employees have no other options. The situation may apply to the government officers and the residents equally who work/live in and near the downtown. We recommend the city establish designated parking. The designated parking can be much more effective if the city implements the paid parking system and the employers/the city government offers incentives for its employees, the officers, and the residents.

The city’s stricter parking enforcement is crucial for designated parking spaces. Signs must indicate that the designated spaces require permits for employees, government officers, and nearby residents/apartment tenants. Other than the designated parking areas, all—disregarding officers, visitors, employees, or residents—should be treated equally, and any parking violations must be enforced firmly.

R5. Road diet on 2nd Street

Visitors, merchants, and residents collectively desired more street parking options near Main Street. We believe the 2nd Street--parallel to Main Street and only a block away--has great potential. 2nd Street is a one-way, two-lane road with parallel street parking on both sides of the street. Although there are signs for parallel street parking along the street, the parking lot strips are not visible.

We recommend changing the traffic pattern of 2nd Street, converting it from a two-lane to a one-lane road. The road diet will create space for angled street parking on one side of the street. Figure below is an example found on Evans Street in Downtown Greenville, NC. Washington could replicate a similar street design to provide more street parking on 2nd Street. Evan Street is approximately 240 feet long, accommodating 18 easy to access parking spaces. That is about one parking space for every 13.4 feet of road length. 2nd Street from N Bonner Street to Gladden Street is approximately 1,584 feet long (0.3 miles). Despite excluding driveways and street intersections, it is safe to say that Washington could add about 89 parking spaces along the street. Changing the two-lane road into a one-lane road will also reduce traffic speed along the street, improving pedestrian safety.

Figure 22. Designated parking sign example (image from https://www.myparkingsign.com/mps/employee-parking-signs.aspx)

Figure 23. Angled park on Evans Street, Greenville, NC (Source: Google Maps Streetview)
R6. Street Parking redo

There are a number of places in downtown Washington where street parking is permitted. However, there are often issues with poor demarcation using paint and signage of where these places are.

The rebuilt section of Main St. between Gladden St. and Market St. has very clearly-marked street parking spaces, but the two blocks between Gladden St. and Bridge St. are not marked. Despite this, the two-lane street is wide enough to accommodate parked cars on both curbs comfortably, and people often do so. Other areas where street parking is allowed but not adequately marked include both sides of 2nd St. between Bonner St. and Respess St., as well as the north side between Respess St. and Gladden St. There are only a few short sections with small green signs indicating a one-hour parking zone, and the rest are unsigned entirely. There are no spaces marked in the roadway in these example areas, making conducting the parking survey challenging. We recommend increasing signage in places where people often park and clearly striping the street parking spaces. Street stripping will improve traffic flow and prevent vehicular accidents, help the city comply with ADA regulations, maximize the number of parking spaces, and provide more curb appeal (https://dc-cpaving.com/an-ultimate-guide-to-parking-lot-stripping/).

Another recommendation for its street parking is converting sections of parallel spaces to back-in angle parking (or sometimes called reverse angle parking). While requiring more roadway space, this innovative design is considered the safest parking solution with many benefits. It allows drivers to more easily see oncoming traffic before exiting the space and merging back onto the roadway. It also provides better eye-to-eye contact between drivers, bicyclists, and other road users. Curbside loading/unloading is safely done on the sidewalk. This design provides safety for children since cars open the doors away from traffic and towards the sidewalk. Back-in angle parking reduces the likelihood of crashes. With all benefits, many U.S. communities have successfully implemented this design idea.

In areas with existing street parking and ample curb space, especially on one-way streets such as Main St. or 2nd St., a back-in angle parking implementation may be well worth considering.

R7. Wayfinding in the City

Wayfinding maps and signage are essential navigational resources stationed around cities to help users orient themselves and locate points of interest. In the context of this parking study, installing wayfinding maps can be a tool to increase the awareness and attractiveness of Downtown Washington’s underutilized parking facilities by contextualizing their proximity to attractions and dispelling users’ perception of their remote distance. The City acknowledged its need for an effective wayfinding system in the recommendations of the 2007 Parking Study for Downtown Washington; however, this signage package did not include maps denoting available parking.

This report recommends installing a series of detailed wayfinding maps at critical points downtown, including each public parking lot, each major attraction (such as North Carolina Estuarium), and periodically along Main Street.
In addition to identifying popular attractions and public parking facilities, each wayfinding map should indicate the estimated walking time to destinations from their respective location.

These maps should be easily visible and detailed without overly complicated to comprehend. While a digital map of downtown is currently available using a QR code, it alone may not be sufficiently accessible to users of all ages and incomes. Instead, including the QR code on the physical wayfinding maps as a supplemental resource would be more appropriate.

These wayfinding solutions are economical, easy to implement, and can relieve parking demand by reactivating underutilized parking facilities by improving their visibility.

[Note: This recommendation best works in tandem with the recommendation for improved parking signage R1, which must be in place for users to identify the facilities denoted on the wayfinding map successfully.]

**R8. Real-time mobile parking app**

There is currently app technology that exists and allows people to find parking in real-time, reserve their parking spots, and even pay on a mobile device. The existing apps include ParkMobile, Smart Parking, and ParKing. This recommendation would require a smartphone to be able to download the app. This recommendation could take the headache and stress out of trying to find parking in busy Downtown Washington.

![Figure 27. Mobile Parking App (image source: https://lumi.guide/smart-parking-management/mobile-parking-app/)](image)

**R9. Alternative transportation connecting hotels**

Most hotels in/near Washington are located further from the downtown (Map 7). Since none of them offers transportation service for the customers to the waterfront downtown, visitors must drive the downtown.

Hotels can create a shuttle service to transport visitors from the hotels to the downtown area. Hotels might consider undertaking a shuttle service feasibility study if this option is viable.

Utilizing a shuttle service by a company would be an option: e.g., Zeelo. Typically used to transport employees to their workplace and students to school, such service can also be used to transport visitors from hotels in outskirt the town to downtown Washington. Shuttles will reduce parking pressure and congestion.

![Figure 28. Smart bus option example](image)

Map 7. Hotels in Washington, NC
**R10. Sidewalk upgrades**

Some of the sidewalks outside Main Street could be repaired or redone to help create an enjoyable walkable environment for visitors and residents of Washington alike. The surveys showed that visitors and residents wouldn’t mind parking a short walk away from their destination if the city offers safe and clean sidewalks. Still, the current state of many of the sidewalks around town does not help create the image of a walkable community. We recommend the repairing or the redesigning the sidewalks receiving the most foot traffic and those that connect parking lots to businesses around Washington.

For example, W Main St. entices walking with its beautiful sidewalk design, architecture, and businesses. However, on other streets such as W 3rd St., the sidewalks have weeds growing through cracks or, in some instances, no sidewalk at all. Another example is the sidewalks located along W 2nd St. being too narrow or dilapidated with overgrown weeds and cracks.

In conclusion, sidewalks need to be repaired or redone (if not done so already) to help create an enjoyable walkable environment and reduce the want for automobile travel around town. One recommendation for sidewalk design would be to include trees or flowers on some more paths or more brick sidewalks as seen across the street from the courthouse. Another recommendation would be extending the width of the sidewalks as many can only fit one person walking on the concrete.

**R11. Street lighting**

The addition of street lighting is a vital streetscape element that defines the nighttime visual environment in more urban and pedestrian-prone settings such as downtown Washington.

Quality street lighting will help define a positive urban character and support the area’s nighttime activities, which is critical for traffic safety and pedestrian safety and security. The city should improve lighting for traffic on the main downtown corridor streets and pedestrians walking to and from parking to congregate on the boardwalk. Sufficient lighting for public parking lots, transitional walkways (alleys), and sidewalks in downtown Washington should be prioritized in areas with poor or inadequate lighting, especially on Buckman Ln., the alleys near Main St., 3rd St. between...
Market St. and Union Dr., and 2nd Street between Union Dr. and Respess St.

Street lighting poles should be located on the sidewalk close to the curb on the curbside edge. Pedestrian lighting should also be added to street light poles where feasible unless spacing between street light poles does not support adequate pedestrian lighting, in which case pedestrian lighting may need to be located between street light poles. Bollards could be incorporated in the waterfront boardwalk area and are primarily a safety element to separate pedestrian or streetscape elements from vehicles.

Light poles and bollards should be coordinated with other streetscape aesthetics and element characteristics assigned to the area.

R12. Improving walkability

Washington has great potential to be transformed into a more walkable city considering the city’s size, demographic composition, environment, and existing urban amenities. Jordan Golson, a journalist at WIRED, suggests urban design tactics for more walkable communities (https://www.wired.com/2014/09/7-simple-ways-make-every-city-friendlier-pedestrians/). The recipe includes creating fine-grained pedestrian circulation and orienting buildings to streets. The urban fabric of Washington is not bold. The street blocks are small, with stores facing to streets. He also suggests providing clear, continuous pedestrian access and building “complete streets”—Urban development that focuses on all the functions a street can serve for pedestrians, bikes, public transit, and personal vehicles. Placing parking behind or below the building can also encourage people to walk.

In addition to urban design, citizen education can be an effective way for the city to consider. The city must remind people of the many excellent and healthy benefits of walking. The City of Washington can provide educational materials and offer classes to re-teach citizens how walking will improve their physical and mental health and benefit everyone in the community. Those benefits include equity, healthy, social benefits, less demand for automobiles, economic development, and enjoyment of walking. Such materials should be promoted proactively via the city’s website, social media, street signs, public buildings, and mailing to its residents. We believe the increase in walkability will reduce traffic volume and the demand for more parking.

R13. Adding bicycle facilities

There are no bicycle facilities or amenities for cyclists within the study area. However, the resident survey found that they are willing to bike instead of driving; thus, investing in proper facilities will benefit the current parking situation.

On a small scale, bike racks can be implemented along the Main Street sidewalks so that people will be able to park their bikes and walk into stores and restaurants. These racks would accommodate locks that bikers can use to ensure that their bicycles will not be stolen when they are not watching them. These should be spread apart throughout the Downtown and waterfront areas so that people who choose to bike do not have to park far away from where they are going. These refined facilities will promote bicycle traffic as they are easier to use to get around the town than driving.

On a larger scale, bike lanes or space allocated along Downtown streets for cyclists would allow safe bicycle traffic. In most Downtown streets, the speed limit is set at 15 miles per hour, which is a safe speed limit for bikes to be traveling alongside vehicular traffic. Bikeways should be designed to accommodate the needs while considering all aspects the city may offer/restrict. The bikeways can be shared streets (shared lane markings, bike boulevards), on-streets (paved shoulders, traditional bike lanes, buffered bike lanes), or separated pathways (between-the-curb bollards or median, above-the-curb sidepath, shared-use path/greenway).
R14. Fee parking

One of the oft-mentioned grievances about the parking situation in downtown Washington is the congestion along primary streets, such as Main St. and Market St., along the waterfront, and in front of the courthouse. Employees and patrons of the businesses along Main St. compete for parking spaces close to their destinations, leading to an over-concentration of vehicles parked in certain areas while parking lots only one or two blocks away sit nearly empty. Naturally, most people want to park their cars in a location that is as convenient as possible for reaching their destination and will look for parking in nearby areas. This pattern of behavior is unlikely to be changed without an incentive to park in an area somewhat farther away. Therefore, one of our suggestions for reducing parking congestion in these high-demand areas is to require drivers to pay to park in these high-demand areas while allowing free parking in more distant perimeter lots.

As shown by some of the case studies in this report, requiring drivers to pay to park in high-demand areas reduces parking congestion within those areas. Considering that, on the whole, there is adequate parking supply in downtown Washington, but that the supply is not sufficient in the areas of high demand during many parts of the day, the city would do well to disincentivize parking in the highest-demand areas and disperse the need for parking out to areas where there is an adequate supply. Furthermore, requiring visitors to the downtown area to walk a certain distance before reaching their destinations rather than parking near will encourage them to linger downtown for a more extended period and visit other businesses besides their primary destination. It is important to note that requiring parking fees in the highest-demand areas will necessitate adopting complementary strategies, such as improving alleys and pedestrian infrastructure, improving wayfinding, and modifying and improving parking lots to make them more accessible for the public use.

There are two primary methods of levying parking fees. Traditional coin-operated parking meters, with a meter for each individual parking space, could be effectively used to reduce parking demand. Another piece of infrastructure that serves the same purpose is the modern electronic parking kiosks which are now widespread in many cities. These kiosks allow drivers to pay using cash or card and give drivers tickets to display on their windshields. There are several advantages and disadvantages to be discussed for each method. Parking meters are convenient and easy to use for drivers; however, some drawbacks exist, such as
as potentially higher installation costs and maintenance requirements due to the sheer number needed and their mechanical operation. Electronic kiosks allow for a single installation for an entire parking lot or street block, leading to lower infrastructure costs and allowing drivers to use non-cash payment methods. However, they may be difficult for those unfamiliar with electronics to use, and their electronic nature could incur higher maintenance costs when they fail. Furthermore, it should be noted that electronic kiosks have the potential for marginally higher revenue intake since there cannot be "time left on the meter" with these installations.

Several other variables should also be considered. First, a flexible parking cost technique may be considered. Higher fees for times of the day when demand is greater would likely help disperse demand to other lots and should be considered. Many different areas face high demand during different times of the day and during the week; for example, the lot across 2nd Street from the courthouse is filled during midday while the waterfront lots are not; this situation is reversed during the evening and on the weekend. In addition, some lots will need a limited number of designated spaces requiring permits rather than payment for employees, people on court business, and nearby residents/apartment tenants.

We recommend that parking fees be required for the waterfront lots and the lots across 2nd Street from the courthouse. We would encourage the city to use variable fees in these areas to regulate demand during different times of the day. We also recommend that payments be required along Main Street between Gladden and Market Streets, Market Street between Water and 2nd Streets, and Stewart Parkway between Market and Main Streets. When coupled with good wayfinding and pedestrian infrastructure, requiring payment for parking will allow for a more even distribution of parking demand, eliminating much of the "shortage" of parking in downtown Washington. It will also create a more walkable environment that encourages visitors to linger and spend more time patronizing downtown businesses and enjoying the downtown area.

R15. Parking enforcement
During the stakeholders’ meeting, we learned three main things about the parking situation in Washington. Downtown visitors are not fond of walking downtown from a little further away, downtown visitors would like to park close to the businesses they are visiting, and business owners and employees want to park in the street spaces directly in front of their business. Having parking patrols in downtown Washington could solve or significantly reduce those issues. With fee parking and designated parking for employees, public officials, and residents enforced, parking enforcement will be much more effective.

The addition of parking enforcement would create revenue for the city. Parking tickets and money put into meters would be the sources of revenue. Parking enforcement would also create jobs for the city of Washington. Most cities that enforce 2-hour and metered parking implement only those from 8 am to 5 pm, so an officer would not be needed for after hours. Enforcement would still be necessary on weekends, though, as that is when most people are out visiting shops and restaurants.

R16. Parking deck
The research team suggests that Washington does not need a parking deck. A parking deck is economically unfeasible for the city. It is too expensive to build and maintain. Based on current estimates, the average cost to construct a 150,000 square-foot multilevel parking garage is almost $10 million. This hefty price tag creates a heavy burden on the tax base. Additionally, there is a problem with equity as not all of the tax base will see the deck’s economic benefit. We believe other recommendations will sufficiently provide enough parking for all.

Adding a parking deck will stand out and create issues with aesthetic continuity. The Washington Historic District Design Standards state that the building form of new constructions must be considered. This includes “scale, massing, height, orientation, materials, and architectural details (p. 87).” Adhering to the historic design standards will make constructing a multi-level parking deck in the charming downtown area quite difficult. For instance, Standard 5.1.2 notes that the height of a new building structure should relate to the prevailing height along the street, not to exceed 15 feet above the average height of the surrounding buildings. Although the standards recognize the
design of deck parking, there are frequent mentions of concerns over compatibility of size, scale, proportion, and materials with the rest of the district (5.1.16). Adding a parking deck would likely hurt Washington’s ability to preserve and enhance the historic character. The preservation and enhancement of said charter is the cornerstone of the Historic District Design Standards and respective Historic Preservation Commission. The only way to champion historic preservation while building a deck would be to construct it further away from the historic district, requiring people to walk or bike several blocks to get downtown. That would be a considerable waste of resources and tax dollars. Several practical and cost-effective recommendations implement, including the ones mentioned in this study’s recommendation sections. These recommendations keep parking closer to the target area and are well within Washington’s capabilities.
# Appendix 1. Field Observation Template

Your name: ________________________________

Date of visit: ________________________________

Arrival time: ________________________________

You are observing (check): Site 1 [ ] Site 2 [ ] Site 3 [ ] Site 4 [ ]

## PARKING LOT:

- **Mark on the map:** Parking lot boundary, entrance, and parking sign location — *You will need to assign a number (#) on each parking lot so that the map and this sheet will talk to each other.*

- Please measure the **parking spaces** at the beginning and the end of the field observation:

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STREET PARKING:

- **Mark on the map**: Street parking marked on the surface (from and to). Draw a line on the map. – *You will need to assign a number (#) so that the map and this sheet will talk to each other.*
- **Photo**: *Any sign/regulation* for the street parking? + *Where* they are (mark on the map)?

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</tbody>
</table>

<table>
<thead>
<tr>
<th>Street # (should match on the map)</th>
<th>Street # (should match on the map)</th>
<th>Street # (should match on the map)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time # available space</td>
<td>Time # available space</td>
<td>Time # available space</td>
</tr>
<tr>
<td>Mark one</td>
<td>Mark one</td>
<td>Mark one</td>
</tr>
<tr>
<td>One side</td>
<td>One side</td>
<td>One side</td>
</tr>
<tr>
<td>Both directions</td>
<td>Both directions</td>
<td>Both directions</td>
</tr>
<tr>
<td>Beginning</td>
<td>Ending</td>
<td></td>
</tr>
</tbody>
</table>
ON THE BLOCK:
- Mark on the map:
  - Any potential parking spaces *(empty spaces)*?
  - Is the street **one-way or both ways**? Mark the **directions** if one-way.
  - **Sidewalks.** We will analyze the connectivity of the sidewalk. **Mark on the map.** Photo(s) would be helpful, too.

<table>
<thead>
<tr>
<th>Sidewalk # (should match on the map)</th>
<th>Sidewalk # (should match on the map)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (mark one)</td>
<td>Lighting (mark one)</td>
</tr>
<tr>
<td>___ Enough ___ Need more ___ None</td>
<td>___ Enough ___ Need more ___ None</td>
</tr>
<tr>
<td>Approx width</td>
<td>Approx width</td>
</tr>
<tr>
<td>___________ feet</td>
<td>___________ feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sidewalk # (should match on the map)</th>
<th>Sidewalk # (should match on the map)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (mark one)</td>
<td>Lighting (mark one)</td>
</tr>
<tr>
<td>___ Enough ___ Need more ___ None</td>
<td>___ Enough ___ Need more ___ None</td>
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<tr>
<td>Approx width</td>
<td>Approx width</td>
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<tr>
<td>___________ feet</td>
<td>___________ feet</td>
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</table>

<table>
<thead>
<tr>
<th>Sidewalk # (should match on the map)</th>
<th>Sidewalk # (should match on the map)</th>
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</thead>
<tbody>
<tr>
<td>Lighting (mark one)</td>
<td>Lighting (mark one)</td>
</tr>
<tr>
<td>___ Enough ___ Need more ___ None</td>
<td>___ Enough ___ Need more ___ None</td>
</tr>
<tr>
<td>Approx width</td>
<td>Approx width</td>
</tr>
<tr>
<td>___________ feet</td>
<td>___________ feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sidewalk # (should match on the map)</th>
<th>Sidewalk # (should match on the map)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (mark one)</td>
<td>Lighting (mark one)</td>
</tr>
<tr>
<td>___ Enough ___ Need more ___ None</td>
<td>___ Enough ___ Need more ___ None</td>
</tr>
<tr>
<td>Approx width</td>
<td>Approx width</td>
</tr>
<tr>
<td>___________ feet</td>
<td>___________ feet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sidewalk # (should match on the map)</th>
<th>Sidewalk # (should match on the map)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lighting (mark one)</td>
<td>Lighting (mark one)</td>
</tr>
<tr>
<td>___ Enough ___ Need more ___ None</td>
<td>___ Enough ___ Need more ___ None</td>
</tr>
<tr>
<td>Approx width</td>
<td>Approx width</td>
</tr>
<tr>
<td>___________ feet</td>
<td>___________ feet</td>
</tr>
</tbody>
</table>
- Any alleys? **Mark on the map** and take a photo of it.

<table>
<thead>
<tr>
<th>Alley #</th>
<th>Alley #</th>
</tr>
</thead>
<tbody>
<tr>
<td>(should match on the map)</td>
<td>(should match on the map)</td>
</tr>
<tr>
<td>Lighting (mark one)</td>
<td>Lighting (mark one)</td>
</tr>
<tr>
<td>___ Enough ___ Need more ___ None</td>
<td>___ Enough ___ Need more ___ None</td>
</tr>
<tr>
<td>Approx width</td>
<td>Approx width</td>
</tr>
<tr>
<td>__________ feet</td>
<td>__________ feet</td>
</tr>
</tbody>
</table>

- **Bicycle facilities:**
  - Mark on the map if there is a bicycle lane. A photo would be great.
  - Any bicycle facilities?

- Any other **alternative transportation facilities**? What and where (mark on the map)?
Appendix 2. Resident Survey

Downtown Washington Parking Study - Residents

Welcome!

You are invited to participate in a research study titled “Washington Parking Study” conducted by students in the Community and Regional Planning program at East Carolina University. This survey is being undertaken to assist the Town of Washington in a Parking Study of the downtown area.

This survey is to gather your input on parking conditions in Downtown Washington. It is hoped that this information will assist us in gaining a better understanding of the challenges around access to parking within the downtown area.

The goal is to survey at least 30 residents who live near the downtown area. The survey should take no more than 8 minutes to complete. Your responses will be kept confidential, and no data will be released or used with your identification attached. Your participation in the research is voluntary. You may choose not to answer any or all questions, and you may stop at any time. There is no penalty for not taking part in this research study. Please call Dr. Misun Hur at 252-328-1270 or email her at hurmi@ecu.edu if you have any questions or concerns.

Do you consent to respond to this survey?

☐ Yes, I consent.
☐ No, I do not consent.

Study Area Information
We have identified the red outlined area as our project area in the parking study. When referring to "Downtown Washington," throughout the survey, we will be referring to the red outlined area.
Select your age group.

- 18 - 24
- 25 - 34
- 35 - 44
- 45 - 54
- 55 - 64
- 65-74
- 75-84
- Over 85

How far do you live from Downtown Washington?

- I live in Downtown Washington
- Less than 1/4 mile
- 1/4 mile to 1/2 mile
- 1/2 mile to 1 mile
- 1 mile to 2 miles
- 2 miles to 5 miles
- More than 5 miles
How many times a week do you travel to and from Downtown Washington?

- Many times in a day
- Once a day, every day
- 4-6 times a week
- 2-3 times a week
- Once a week
- 2-3 times a month
- Once a month
- Other: (please specify) [ ]

How much time do you usually spend in Downtown Washington?

- Less than 30 minutes
- 30 minutes to 1 hour
- 1 to 2 hours
- 2 to 3 hours
- 3+ hours

When do you usually visit Downtown Washington?

- Weekdays
- Weekends
During what time(s) of the day do you usually visit Downtown Washington?

- Morning
- Lunch time
- Afternoon
- Dinner time
- Evening

When traveling to and from Downtown Washington, what is your main mode of transportation?

- Drive alone
- Carpool or dropped off by someone
- Golf cart
- Motorcycle
- Beaufort Area Transit System (BATS Bus)
- Ride bicycle
- Walk
- Other: (please specify)

In your opinion, finding parking in Downtown Washington is:

<table>
<thead>
<tr>
<th>Very accessible</th>
<th>Accessible</th>
<th>Neutral</th>
<th>Somewhat difficult</th>
<th>Very difficult</th>
<th>Unable to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Accessibility: 0
Pinpoint on the map where you frequently park when you visit the downtown. (You may select multiple places.)
Pinpoint on the map of Downtown Washington where you find it the most difficult to park. (You may select multiple points.)
When is parking the most difficult to find in Downtown Washington?

- Morning
- Lunch time
- Afternoon
- Dinner time
- After dinner
- On the weekend
- Other: (please specify)

Please identify which activities you participate in for each day you visit Downtown Washington.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dining</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting a public office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting a private office</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attending religious service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visiting a museum, gallery, educational center, etc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water access/activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How likely would you consider parking a few blocks away if you **must pay for parking** (parking meters, parking fee) in downtown?

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Neutral</th>
<th>Somewhat unlikely</th>
<th>Very unlikely</th>
<th>Prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid parking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How likely would you consider parking a few blocks away and **walking, biking, or riding a shuttle** to your building if bikes or shuttles would be provided?

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Neutral</th>
<th>Somewhat unlikely</th>
<th>Very unlikely</th>
<th>Prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative parking</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How likely would you consider walking or bicycling if **sidewalk improvements** were provided?

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Neutral</th>
<th>Somewhat unlikely</th>
<th>Very unlikely</th>
<th>Prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sidewalk improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3. Merchant Survey

Default Question Block

Washington Parking Study - Merchant

Welcome!

You are invited to participate in a research study titled “Washington Parking Study” conducted by students in the Community and Regional Planning program at East Carolina University. This survey is being undertaken to assist the Town of Washington in a Parking Study of the downtown area.

This survey is to gather your input on parking conditions in Downtown Washington. It is hoped that this information will assist us in understanding better some of the challenges around access to parking within the downtown area.

The goal is to survey at least 30 residents who live near the downtown area. The survey should take no more than 8 minutes to complete. Your responses will be kept confidential, and no data will be released or used with your identification attached. Your participation in the research is voluntary. You may choose not to answer any or all questions, and you may stop at any time. There is no penalty for not taking part in this research study. Please call Dr. Misun Hur at 252-328-1270 or email her at hurmi@ecu.edu if you have any questions or concerns.

Do you consent to respond to this survey?

☐ Yes, I consent.

☐ No, I do not consent.

What is the type of your business? (for example restaurant, bakery, and art gallery)
Do you have designated parking area(s) for your customers?

- Yes
- No

Pinpoint on the map the designated parking area(s) for your customers.
How many employees do you have other than you?

- 1-2 people
- 3-4 people
- 5-6 people
- 7-8 people
- 9-10 people
- More than 10 people

How do you get to work? (please select all mode of transportation)

- Drive alone
- Carpool or dropped off by someone
- Golf cart
- Motorcycle
- Beaufort Area Transit System (BATS Bus)
- Ride bicycle
- Walk
- Other: (please specify)

Where do you usually park when working?

- Public parking lot
- Paid (private) parking lot
- Government parking lot
- Street parking
- Other
When is your business busiest?

<table>
<thead>
<tr>
<th>Day</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Evening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Wednesday</td>
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<td></td>
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<tr>
<td>Thursday</td>
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<td></td>
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<tr>
<td>Friday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sunday</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you think your customers experience parking problem(s)?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
</tr>
<tr>
<td>Rarely</td>
<td>2</td>
</tr>
<tr>
<td>Some times</td>
<td>3</td>
</tr>
<tr>
<td>Often times</td>
<td>4</td>
</tr>
<tr>
<td>Always</td>
<td>5</td>
</tr>
</tbody>
</table>

Parking problems

Do you believe that the lack of parking has affected your business?

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
</tr>
<tr>
<td>Rarely</td>
<td>2</td>
</tr>
<tr>
<td>Some times</td>
<td>3</td>
</tr>
<tr>
<td>Often times</td>
<td>4</td>
</tr>
<tr>
<td>Always</td>
<td>5</td>
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</tbody>
</table>

No

How likely would you consider parking a few blocks away if you **must pay for parking** (parking meters, parking fee) in downtown?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Score</th>
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<tr>
<td>Somewhat likely</td>
<td>2</td>
</tr>
<tr>
<td>Neutral</td>
<td>3</td>
</tr>
<tr>
<td>Somewhat unlikely</td>
<td>4</td>
</tr>
<tr>
<td>Very unlikely</td>
<td>5</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td></td>
</tr>
</tbody>
</table>

Paid parking
How likely would you consider parking a few blocks away and **walking, biking, or riding a shuttle** to your building if bikes or shuttles would be provided?

<table>
<thead>
<tr>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Neutral</th>
<th>Somewhat unlikely</th>
<th>Very unlikely</th>
<th>Prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Paid parking [ ]

How likely would you consider walking or bicycling if **sidewalk improvements** were provided?

<table>
<thead>
<tr>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Neutral</th>
<th>Somewhat unlikely</th>
<th>Very unlikely</th>
<th>Prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

Sidewalk improvements [ ]

Please list any suggestions you have for parking improvements in Washington.

[ ]

 Powered by Qualtrics
Appendix 4. Visitor Survey

Consent

Washington Parking Study - Visitor

Welcome!

You are invited to participate in a research study titled “Washington Parking Study” conducted by students in the Community and Regional Planning program at East Carolina University. This survey is being undertaken to assist the Town of Washington in a Parking Study of the downtown area.

This survey is to gather your input on parking conditions in Downtown Washington. It is hoped that this information will assist us in understanding better some of the challenges around access to parking within the downtown area.

The goal is to survey at least 30 people visiting the downtown area. The survey should take no more than 10 minutes to complete. Your responses will be kept confidential, and no data will be released or used with your identification attached. Your participation in the research is voluntary. You may choose not to answer any or all questions, and you may stop at any time. There is no penalty for not taking part in this research study. Please call Dr. Misun Hur at 252-328-1270 or email her at hurmi@ecu.edu if you have any questions or concerns.

Do you consent to respond to this survey?

- Yes, I consent.
- No, I do not consent.

Block 1 - Visitor info
Are you a visitor to downtown Washington?

○ No
○ Yes

If so, where are you from?

○ Eastern North Carolina
○ Elsewhere in North Carolina
○ Out of State
○ International

What brings you to downtown Washington?

□ Work
□ Family and Friends
□ Shopping and Dining
□ Waterfront
□ Boating and Recreation
□ Others

How often do you visit downtown Washington?

○ Very often
○ Often
○ Sometimes
○ Not often
○ Rarely
Block 2 - Parking

Did you park in downtown Washington?

- Yes
- No

Where did you park?
Was it difficult to find parking?

- Very difficult
- Somewhat difficult
- Neither easy nor difficult
- Somewhat easy
- Very easy

Block 3 - Lodging and Travel

Are you staying at a hotel?

- Yes
- No

Which hotel?

How did you get downtown from there?

- Drive
- Walk
- Carpool/ride-sharing
- Bicycle
- Transit
- Other
What do you think about the availability and quality of the following downtown?

<table>
<thead>
<tr>
<th></th>
<th>Extremely poor</th>
<th>Poor</th>
<th>Neutral</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parking</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Signage and Directions</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Sidewalks</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Lighting</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Block 4 - Hypotheticals

How far would you be willing to walk from your parking space?

- ○ Less than 1 block
- ○ 1-3 blocks
- ○ 3-5 blocks
- ○ More than 5 blocks

How likely would you consider parking a few blocks away if you must pay for parking (parking meters, parking fee) in downtown?

- ○ Very likely
- ○ Somewhat likely
- ○ Neither likely nor unlikely
- ○ Somewhat unlikely
- ○ Very unlikely
How likely would you consider parking a few blocks away and walking, biking, or riding a shuttle to your destination if bikes or shuttles would be provided?

- Very likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Very unlikely

How likely would you consider walking or bicycling if sidewalk improvements were provided?

- Very likely
- Somewhat likely
- Neither likely nor unlikely
- Somewhat unlikely
- Very unlikely

Please list any suggestions you have for parking improvements in Washington.
Appendix 5. Public Officer Survey

Default Question Block

Washington Parking Study - Government Officer

Welcome!

You are invited to participate in a research study titled “Washington Parking Study” conducted by students in the Community and Regional Planning program at East Carolina University. This survey is being undertaken to assist the Town of Washington in a Parking Study of the downtown area.

This survey is to gather your input on parking conditions in Downtown Washington. It is hoped that this information will assist us in understanding better some of the challenges around access to parking within the downtown area.

The goal is to survey at least 30 residents who live near the downtown area. The survey should take no more than 10 minutes to complete. Your responses will be kept confidential, and no data will be released or used with your identification attached. Your participation in the research is voluntary. You may choose not to answer any or all questions, and you may stop at any time. There is no penalty for not taking part in this research study. Please call Dr. Misun Hur at 252-328-1270 or email her at hurmi@ecu.edu if you have any questions or concerns.

Do you consent to respond to this survey?

☐ I consent to having my answers used

☐ I DO NOT consent to having my answers used
Do you work in downtown Washington?

- Yes
- Sometimes
- No

Where do you work?

What time did you arrive at work?

How challenging is it to find a parking space when you arrive to work?

- Very easy
- Somewhat easy
- Neutral
- Somewhat difficult
- Very difficult

How long does it usually take to find an open space once you arrive?

- Less than a minute
- 1 - 5 minutes
- 5 - 10 minutes
- 10 - 15 minutes
- 15 - 20 minutes
- 20+ minutes
How far away from your workplace do you usually park?

- In the workplace parking lot
- 1 block away
- 2 blocks away
- 3 blocks away
- 4 blocks away
- 5 blocks away
- 5+ blocks away

Is there a specific lot or street where you usually park?

- Yes
- No

In which lot or street do you usually park?
Do you drive or walk to lunch, or bring lunch with you?

☐ Drive
☐ Walk
☐ Bring with me

How difficult is it to find an open space when you return?

☐ Very easy
☐ Somewhat easy
☐ Neutral
☐ Somewhat difficult
☐ Very difficult

Which days are most difficult to find parking?

☐ Monday
☐ Tuesday
☐ Wednesday
☐ Thursday
☐ Friday
☐ Saturday
☐ Sunday
☐ No particular difficulty any day

Are there any times of the year when finding an empty space is more difficult?
Do court sessions affect your ability to find parking?

- Yes
- No
- Unsure

How likely would you consider parking a few blocks away if you must **pay for parking** (parking meters, parking fee) in downtown?

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Neutral</th>
<th>Somewhat unlikely</th>
<th>Very unlikely</th>
<th>Prefer not to answer</th>
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Paid parking

How likely would you consider parking a few blocks away and **walking, biking, or riding a shuttle** to your building if bikes or shuttles would be provided?

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<th>Neutral</th>
<th>Somewhat unlikely</th>
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Alternative parking

How likely would you consider walking or bicycling if **sidewalk improvements** were provided?

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<th>Somewhat likely</th>
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Sidewalk improvements

Please list any suggestions you have for parking improvements in Washington.