

**Final Deliverable**

**New Castle Counting Parking Project**

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## Overview

Our team was tasked with investigating the parking situation in historic New Castle. Our duties included gathering the current number of parking spots, gathering public opinion on the current situation (residents and business owners) and recommending potential solutions. Our team also compiled a manual which volunteers could use in the future. This manual would enable volunteers to conduct a survey if parking is still an issue in the future. It would provide tools to count, estimate and project demand of parking to a high level of accuracy.

The map below (Image A) gives a visual representation of the area which was regarded as the main possible “problem area.”

IMAGE A: Map of Area Where Data Was Collected



Note, this outline area includes:

The parking lot behind the Methodist church (entrance/exit is on 5<sup>th</sup>) that is often utilized by local businesses.

## Data on Existing Parking Places

In parenthesis, after the feet measurement, the first spot count is using a 18 foot standard Delaware Code parking space measurement (see note below) and the second spot count is a 15 foot space measurement, which represents the average space cars park between each other in this area (see Image B below). An “X” indicates that there is not parking on that side of the street.

<b>Street</b>	<b>Block</b>	<b>Side 1 Capacity</b>	<b>Side 2 East Side Capacity</b>
Delaware Street	6th- 5th	X	18 spots
Delaware Street	5th - 4th	X	18 spots
Delaware Street	4th - 3rd	X	8 spots
Delaware Street	3rd - Dalby Ave	21 spots (included: 1 official use only)	28 spots (included 1 official use only)
Delaware Street	2nd - The Strand	X	3 spots
Delaware Street	The Strand- to water's edge	X	29 spots (loops around by water's edge)
Harmony	5th-4th	316 ft. (17 spots, 21 spots) side of road farthest from Delaware St.	343 ft. (19 spots, 23 spots)
Harmony	4th-3rd	136 ft. (7 spots, 9 spots)	138 ft. (8 spots, 9 spots)
Harmony	3rd-2nd	244 ft. (14 spots, 16 spots)	277 ft. (15 spots, 18 spots)
Harmony	2nd- The Strand	303 ft. (17 spots, 20 spots)	275 ft. (15 spots, 18 spots)
5th Street	South St. - Harmony St.	1,010 ft. (56 spots, 67 spots)	1,004 ft. (56 spots, 67 spots) underside of 5th, closest to water

Williams St	5th - 4th	331 (18 spots, 22 spots)	X
Shaw Alley	5th- 4th	70 (4 spots, 5 spots)	X
4th Street	South St. - Harmony St.	1,211 (67 spots, 81 spots)	1,166 (65 spots, 78 spots)
3rd Street	South St. - Harmony St.	1,350 ft. (75 spots, 90 spots)	481 ft. (27 spots, 32 spots)
Market Street	Delaware St. - Harmony St.	547 ft. (30 spots, 36 spots)	507 ft. (28 spots, 34 spots)
E 2nd St Street	Delaware St. - Harmony St.	X	560 ft. (31 spots, 37 spots)
The Strand	Delaware St. - Harmony St.	596 ft. (33 spots, 40 spots)	626 ft. (35 spots, 42 spots)
Methodist Church Parking Lot	Entrance/Exit off of 5th Street	42 spots	

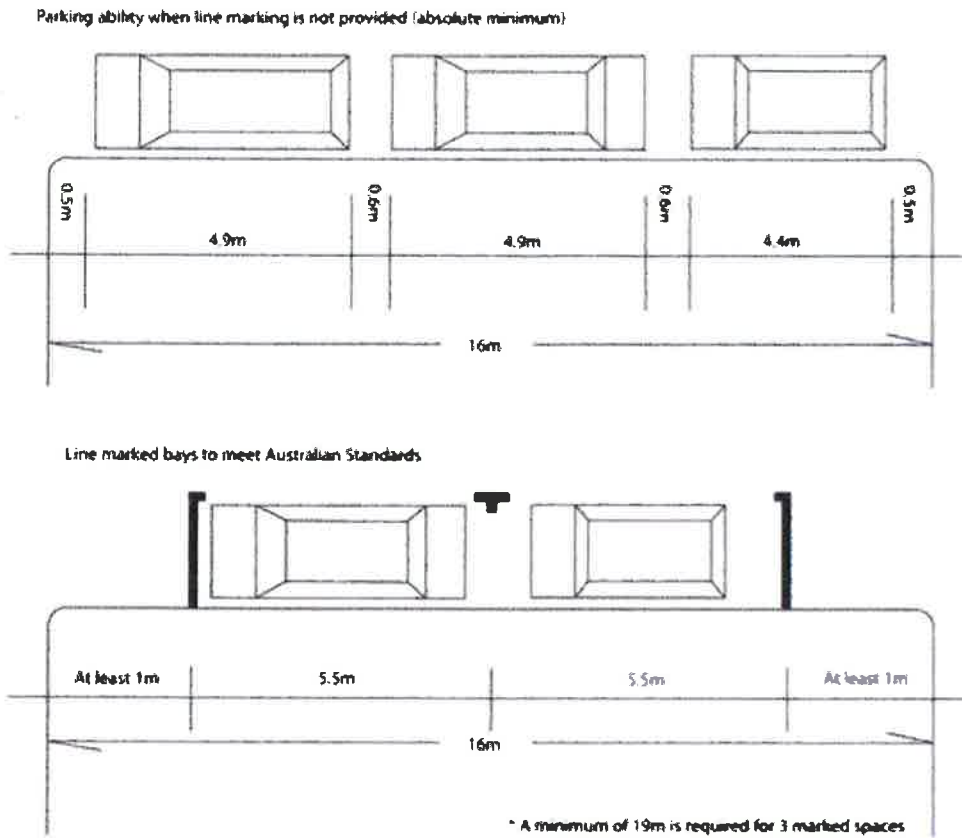
Note: If the street parking was not already lined, the spots were measured according to the following: 1) Minimum space must be **18 feet** long and 2) no parking within **15 feet** of a fire hydrant, **20 feet** of a crosswalk, or **30 feet** of a stop sign and/or traffic light. These measurements are in compliance with Delaware Code Title 21, Section 4179.

<b>Total Parking Spaces Available using 18 feet requirement</b>	<b>Total Parking Spaces Available using 15 foot standard</b>
804 Parking spots	*932 Parking Spots

\*Note that spots along Delaware Street which were already lined were included as one space (even though they are not 15 feet)- see Image C Below. Only unlined parallel spots were evaluated using the 15 foot standard.

*Our findings are also available on a visual display board which will be presented to the Planning Commission Meeting on April 25th.*

## IMAGE B: Parking Ability Depending on Lined Vs. Unlined Streets



Source: <http://www.portphillip.vic.gov.au/line-marking-parking-spaces.htm>

Measurement notes:

5.5 meters= 18 feet (DE Code Requirement)

4.6 meters= 15 feet (Average in space between cars with unlined parallel parking)

## IMAGE C: Delaware Street Lined Parking



## **Public Opinions from Residents & Business Owners**

Residents and business owners were asked: What is your general opinion of the parking situation? If you think there is a problem, what would you like to see done to fix it?

After talking to at least five business owners and over ten residents we received the following observations:

- Adding parking lines to the street would prove ineffective because individuals currently do not follow the line indicators (see Image D below).
- Residents do not want to pay for residential parking permits and most neighbors understand “the spot in front of my house is generally mine” rule.
- There should not be metered parking anywhere within the area, because the town needs to work on attracting more people to the area, this would further deter people.

Overall: Residents and business owners want more parking, but it should remain free. They are in favor of adding more parking but do not want residents or business owners or their customers to pay or for the parking to decrease the town’s historic charm.

IMAGE D: Car On Lined-Off Area



## **Recommendations**

Our recommendations are based on the data we collected of existing spots, information learned through the Planning Commission meeting and the committee members, as well as public opinions our group gathered from several residents and business owners. The recommendations are listed in priority order.

### *Increase Parking Lot Capacity with Timely Building*

After gathering information and conducting research, our team's main recommendation to the New Castle Planning Commission would be support of the parking lot that is already proposed behind the M&T bank near Battery Park. However, this lot should be built as soon as possible and have the maximum capacity of cars allowed in that area. This future location of the lot would serve businesses along Delaware Street as well as Battery Park.

### *Ensure Adequate Signage*

In order for this lot to get maximum usage the city should ensure adequate signage is displaying indicating where the lot is located. This will be especially important for out of town residents who are not familiar with the area. Signage should keep with the historic town feel and be eye catching but not too flashy, as to mesh well with current signage within the city's main area.

Signage should also be increased for already existing parking area. It was noted by some residents that people who are new to town are unaware that South Street parking is allowed.

### *Require Commercial Business Employees to Use Parking Lot*

Once this new lot is developed local business owners should encourage their employees to park within the lot in order to alleviate space on Delaware Street for business patrons and guests



### *Possible Additional Parking Lot*

In the future, after the already approved parking lot is built, if there is still an issue another parking lot could be proposed by Chestnut Rd/Wilmington St where the old recycling center used to be (See Image D below).

IMAGE D: Additional Space for Parking Lot



### *Increased Communication with Business Owners*

Many business owners expressed concerns about lack of communication from public officials indicating when they were marking off spots for an event, etc. When our group was surveying the area on a Sunday we noticed spots marked off in front of the old courthouse for that coming Monday. One business owner said this happens quite frequently and they would appreciate more notice about these parking restrictions in order to alert patrons and customers about other available parking. This alert could be done via an email to business owners, or paper mailing.

## **Volunteer Manual for Data Collection**

### Overview

The purpose of this manual is to provide a framework and strategic planning template for future volunteer efforts if the New Castle parking problem persists after the construction of the new parking lot. This manual will provide procedures and practices for measuring existing parking as well as potential future demand. Steps 1 – 4 are highly recommended and steps 5 & 6 are optional.

### Survey Type

#### *Area Parking Surveys*

Area parking surveys are intended to consider all the parking available in an area, whether it's the downtown, residential, or a commercial center. They are usually conducted in response to a perceived lack of parking, now or in the near future. Not only do area studies identify who is parking and how long, they can also identify where there are unused spaces nearby that could be shared, for specific purposes and targeted parkers. [1] This survey type will also give you an indication of how well your local zoning requirements are matching supply of parking with demand.

### Survey Steps

#### *Step 1: Define the Survey Area*

Before the parking survey can be initiated, the survey area must be defined. Acquire a detailed map and delineate the study area by lining the target space. The survey area should include any street that may be impacted by any proposed parking modifications and the outer edge of the survey area should be defined by the maximum distance someone would park and walk to a desired destination near the center of the area.

#### *Step 2: Engage Stakeholders*

Before gathering the survey field data, local stakeholders should be interviewed to learn about perceived parking needs and problems. It is crucial to get the local stakeholders involved in the survey so that any proposed solutions are in favor of local public opinion and benefit those they will affect.

Example questions to be asked include:

- Is overcrowding a problem for only a few blocks?
- Is there a mismatch between supply and demand covering a large area?
- What times of the day do the problems occur, and are these weekdays only or are weekends involved?

*Step 3: Inventory existing parking*

To create an inventory of existing parking, it is helpful to number the blocks. Volunteers should number the block faces and all of the individual parking areas (public and private) within a block. Document this information on the map of the survey area acquired in the in the first step. Next, count the number of on-street and off-street spaces by numbered block. It is very important to note any restrictions on the use of these spaces such as poor condition, handicapped, or time restricted spots.

If the spaces in a particular block aren't marked, measure the theoretical capacity using the parking space specifications given by the Delaware Code. Then measure the actual capacity by counting the number of vehicles currently parked. It may also be useful to estimate how many additional vehicles could be parked without blocking other vehicles, fire lanes, trash receptacles, etc.

The information can be recorded in a table similar to this format

Block Number	Distance Along Curb (measured in feet)	Type of Parking (on street/ off street, public/private)	Restricted Spaces (type and # of spaces)	Theoretical Capacity (only required for un-lined blocks)	Actual Capacity (total # of spaces)

#### Step 4: Accumulation Count

Accumulation counts are utilized to obtain data on the number of vehicles parked in the survey area for specific times, usually during peak hours. This data is useful in determining demand because it compares the availability of parking determined by the space count inventory by the actual usage of these spaces.

An accumulation count should be conducted for each day during one week at multiple designated times defined by the volunteers. [2] During the designated times, volunteers will count the number of cars occupying spaces on a given block. The number of vehicles entering and exiting should also be counted then added or subtracted from the total accumulated number of vehicles to measure the actual accumulation of the block.

Days	Block number	Number of spaces	Times	Number of Parked Cars	Entering	Exiting	Accumulation Count
Monday							
Tuesday							
Wednesday							
Thursday							



### *Step 6: Determining Land Use Demand*

Determining the type and intensity of land use and zoning in the study area is another way to estimate demand for parking or supplement the data that has already been collected. Each unit of land use has a reported parking generation rate and this rate can be used to estimate the number of spots needed for each unit. A rule of thumb is to overestimate the demand for parking by about 10 %. For example, if the analysis suggests that the parking demand for a particular facility will be 500 spaces, and then the design should be for 550 spaces.

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[1] For example, church parking could be used for overflow parking for the few peak shopping days of the year, rather than building to peak parking needs, which will remain empty (and not generating profits and taxes) for most of the year.

[2] It is helpful to note that peak times for residential areas include early morning and evening on weekdays, office peak times include weekday afternoons, and restaurant/retail peak times are weekends from early afternoon to late evening.

Sources:

<http://www.mapc.org/resources/parking-toolkit/parking-study-howto>

[http://www.vtpi.org/tdm/tdm73.htm#\\_Toc18599155](http://www.vtpi.org/tdm/tdm73.htm#_Toc18599155)

<http://www.ite.org/parkinggeneration/datacollection.asp>