



# Frederick Freight Needs Assessment

Improving Curbside Management in Historic Downtown Frederick

Final Report, April 2020



**For:** City of Frederick



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## Introduction

The sidewalks of historic Downtown Frederick are bustling with life: window-shoppers perusing the offerings at various storefronts, diners enjoying meals outside on sidewalks, residents strolling children and walking dogs, and a wide variety of visitors appreciating the historic and cultural architecture of the City. Right next to them, the streets of Downtown Frederick are filled with activity: residents running errands, commuters travelling to work, visitors looking for parking, delivery trucks bringing supplies to shops and restaurants, transit buses carrying passengers, and people bicycling their way around Downtown. The curb is where these worlds meet.

Managing the curbside well—reducing conflicts, providing legal and reliable space for all, and maintaining safe, convenient, and accessible paths for people travelling between the street and sidewalk—facilitates shopping and deliveries' arrival at retail establishments, restaurants, and offices. If the curb is not managed well, trucks may need to unload deliveries in travel lanes and ride hailing vehicles like Uber and Lyft may need to double-park while waiting for passengers, contributing to travel delay and placing drivers and passengers at unnecessary risk.



## Study Questions & Response Summary

This study assesses Frederick's needs with regards to facilitating safe and convenient freight delivery to the curbside in Downtown Frederick while retaining—and potentially reclaiming—as much space as possible for other uses: parking, ride hailing “drop off zones,” “parklets,” and more. Specifically, the study was developed to address the following questions:

- **Does the current system of curbside management in Downtown Frederick adequately serve the City's needs?**

In general, the City's curbside management approach does adequately serve the needs of Downtown Frederick.

- **What opportunities exist to improve curbside management in Downtown Frederick?**  
A few changes to individual loading zones may be able to better match loading zones to businesses' needs.

- **How will the City's needs with regards to curbside management change in the next ten years due to evolving technology and transportation trends?**

The City should prepare to revise its curbside management policies to better accommodate a higher number of short-term deliveries (such as Amazon Prime), as well as to better accommodate ride-hailing services such as Uber and Lyft. Policies that would encourage businesses to use Amazon lockers and ride-hailing services to use vehicle stands may be advisable.



- **If the City identifies locations that are no longer needed for as loading zones, how can it best utilize that space?**

Loading zone spaces no longer needed for loading and unloading during daytime hours could revert to standard parking spaces or be converted to part-time or potentially full-time use as “parklets” or other community space.

This report outlines why the current system of curbside management meets Frederick’s present needs by reviewing five factors: loading zone placement and distribution, loading zone envelope, loading zone hours, loading zone signing, and off-street loading. Current conditions are acceptable for four of the five factors (the exception being loading zone signing). Nevertheless, for each factor, some opportunities for improvement do exist.

These recommendations arise from an exercise conducted by the assessment team to propose a reallocation of loading zone space that would better match loading zone hours and locations with the business types near those loading zones. The exercise did not presume that wholesale changes to the loading zone network in Downtown Frederick were necessary, but was conducted to assess whether meaningful improvements could be made to the loading zone network without making wholesale changes, and whether those changes could recover some curbside space for the community in the process.

## Study Area

This report considers a Downtown Frederick study area roughly bounded by 7<sup>th</sup> Street on the north, East Street on the east, South Street on the south, and Bentz Street on the west. Along the study area roadways, there are more than 110,000 linear feet of curb space, of which more than 1,700 linear feet are dedicated—at least part of the day—to commercial loading. Within the study area, the memo explores five issues and opportunities for the City and its downtown stakeholders to consider: loading zone placement and distribution, loading zone envelope, loading zone hours, loading zone signing, and off-street loading.

## Report Outline

The report begins with a summary of field observations and stakeholder discussions. Then, for each factor assessed, the report explains the issue, describes existing conditions within Downtown Frederick, states whether existing conditions are generally acceptable, and provides at least one recommendation to help address any challenges raised by the existing conditions.

Then, the report presents a review of trends and changes that may affect future curbside management needs in Downtown Frederick, including new developments, Amazon Lockers, and ride-hailing services. Finally, the report concludes with future opportunities for Frederick to continue to modernize its loading zone operations and curbside management in light of changes in the transportation and logistics industries.

Study Area



## Field Observations

The assessment team conducted field observations to document existing conditions, note behavior of motorists, pedestrians, and delivery drivers, and identify challenges for further investigation. The following were key observations from the field:

- › Most delivery drivers use existing loading zones rather than double-parking or occupying other parking spaces. However, certain types of deliveries were more likely to double-park. These included deliveries to offices (such as office supplies or shredding services), as well as short-term package deliveries (such as UPS, FedEx, and Amazon Prime).
- › Delivery drivers frequently park once in a loading zone, make a delivery to one business, and then return to their vehicle to unload and deliver to a second or third business, rather than relocating their vehicle multiple times to the loading zone closest to each business.
- › Most pedestrians and motorists were aware and respectful of delivery drivers' needs during morning hours. During afternoon hours, when there is more traffic and fewer loading zones, conflicts are more frequent.

## Stakeholder Discussions

The assessment team held a roundtable focus group with business owners and had discussions with delivery drivers, Downtown Frederick Partnership staff, and Parking Department staff in order to gain their perspective on existing curbside management and possible improvements. The following are key takeaways from the stakeholder discussions.

- › Parking Department staff provided an overview of the inception and history of the current loading zones and described enforcement efforts.
- › Business owners and delivery drivers agreed that current conditions generally work well, and none felt that wholesale changes are necessary.
- › Business owners specifically stated that North Market Street needs more afternoon loading zone time, noting that there are only two loading zones on North Market during after 10am, on the east side of the unit and 100 blocks. In contrast, they stated that Patrick Street generally does not need more loading zone time.
- › Business owners and Downtown Frederick Partnership staff described the need for better curbside management on Friday and Saturday evenings as well as during special events. As loading zone parking restrictions end at 5pm, short-term deliveries for special events after that time occupy parking spaces. In addition, ride-hailing services (Uber and Lyft) do not always have appropriate places to wait for fares and have been observed waiting in hazardous locations.

## Loading Zone Locations

In the absence of a convenient, legal loading zone, delivery and for-hire vehicle drivers cause delays to others and are limited in their ability to safely and conveniently provide their services. Delivery drivers are exposed to the hazards of moving traffic, drivers approaching a vehicle stopped in a travel lane are needlessly delayed, people bicycling are forced to swerve into an adjacent travel lane, pedestrians may be hidden from drivers' view, and those looking for parking may need to park farther away or even decide to shop or dine elsewhere. Therefore, it is in the best interest of communities to manage their curb space to its highest and best use rather than at the behest of or to benefit specific individuals or companies.

Research has found that delivery drivers prefer legal and reliable loading zones to illegally stopping or relying on inconsistently available curbside parking, even if the legal zones are more distant from their destination. Consolidating loading zones can also help reduce traffic congestion by limiting the amount of time drivers spend stopping and backing within the City. Therefore, unless there is a unique need, no more than one loading zone per block face should be the standard, and in some cases, "around-the-corner" loading may be sufficient. Ideally, loading zones should be placed:

- › At the far side of an intersection but not within a crosswalk
- › On block faces where there are multiple commercial users (or on blocks perpendicular)

- › To avoid street trees and street furniture

## Existing Conditions

22 of 25 existing loading zones in the study area are immediately adjacent to an alley or an intersection, which facilitates backing and parking for delivery trucks. Two of 25 block faces within the study area have more than one loading zone:

- › East side of the unit block, North Market Street
- › East side of the 200 block, North Market Street

## Assessment

In general, existing conditions are acceptable to users. In accordance with best practices, most blocks within the study area have only one loading zone, and most loading zones are located at block ends or where an alley permits delivery vehicles to more easily access a loading zone without obstructing traffic for several minutes.

At one location (7 East Patrick Street), the loading zone directly conflicts with a TransIT bus stop. When a vehicle is stopped using the loading zone, transit buses cannot reach the curb to allow wheelchair users to board the bus at the stop. In addition, City code prohibits vehicles from standing at a bus stop, making no exception for unloading commercial vehicles.<sup>1</sup>

## Recommendations

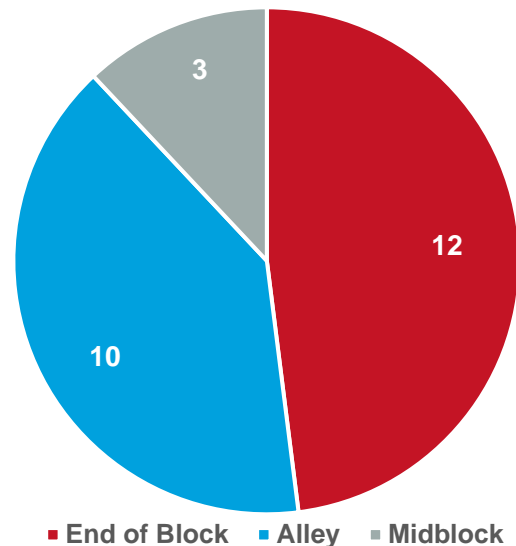
The City should consider adjusting loading zones that are located midblock, locations where there are two discontinuous loading zones on one block—especially where there is another just around the corner, and locations where loading zones conflict with transit stops.

- › The unit block and 200 block of North Market Street should be prioritized for loading zone consolidation. In the case of the 200 block, one of the two loading zones (located near 220 North Market Street) is located midblock with no alley access.
- › The City should consider moving the loading zones currently located at 112-118 North Market Street and 22 South Market Street to locations with alley or end-of-block access.
- › At 7 East Patrick Street, the TransIT stop should be relocated west to the center of the curb bumpout or the loading zone should be relocated to the south side of the street to eliminate the conflict between the loading zone and the bus stop.

## Loading Zone Envelope

In many urban environments, commercial vehicles using loading zones are not typically provided with enough space to be flush to the curb nor is there space adjacent to the vehicle for loading and unloading activities.

## Existing Loading Zone Access



<sup>1</sup> City of Frederick Code of Ordinances, Sec. 13-42

While unloading and handling deliveries, drivers are required to walk around the vehicle, extend ramps and handling equipment, and maneuver goods.

All of these activities require space around the vehicle. Where there is no truck envelope, drivers of commercial vehicles must resort to double parking and using sidewalks and bicycle lanes for unloading activities and the transport of goods by hand. These actions put drivers and other road users in direct conflict and potentially in harm's way.

Loading zones intended for material deliveries should be designed to accommodate, at a minimum, a single unit 30-foot delivery vehicle, requiring or not less than 45' (40' at the end of a block). This allows the vehicle operator enough space to safely parallel park and unload a vehicle from the rear. Where street width can accommodate, there should be an offset between a parked vehicle and the travel lane.

### Existing Conditions:

The most common commercial delivery vehicles in Frederick are 30-foot single-unit trucks (with or without refrigeration) that can be accommodated by a 45-foot loading zone (40-foot at the end of a block). All loading zones in the study area were measured to identify the current parking envelope, and only 3 of the 25 were found to not meet the minimum recommended length.



Loading Zone Length	6AM to 10AM	6AM to 5PM	24 Hours	Total
30' or less	2	0	0	2
31' to 39'	0	0	0	0
40' to 44'	1	2*	0	3
45' to 54'	2	0	0	2
55' to 64'	3	2	1	6
65' to 74'	2	2	0	4
75' to 84'	0	1	0	1
85' to 94'	2	1	0	3
95' or greater	2	1	1	4
<b>Total</b>	<b>14</b>	<b>9</b>	<b>2</b>	<b>25</b>

\*Both of these are located at a block end or alley and so comply with the recommended minimum.

### Assessment

These existing conditions are generally acceptable; 88 percent of loading zones meet minimum length best practices for 30-foot single-unit trucks. Nevertheless, there are specific locations that should be addressed:

- › **1 West 2<sup>nd</sup> Street:** 25.5-foot 6:00 AM to 10:00 AM loading zone
- › **14 West Patrick Street:** 26-foot 6:00 AM to 5:00 PM loading zone
- › **66 South Market Street:** 41-foot 6:00 AM to 5:00 PM loading zone; this loading zone is nearly long enough to meet minimum length best practices, but stakeholder conversations revealed that semitrucks frequently use this loading zone to unload, extending beyond the southern end of the signed loading zone into the no-parking area opposite the fire station and inhibiting emergency egress of fire apparatus.

### Recommendations

The City should address each of the locations that do not meet minimum length standards in a different way:



- › **1 West 2<sup>nd</sup> St:** lengthen this loading zone by one space or to the full distance between the curb bumpouts and eliminate (or reduce by one to two spaces) the around-the-corner loading zone on North Market Street to compensate for the loss of parking due to the lengthened loading zone. This has the additional benefit of reallocating loading space away from Market Street and thus reducing impacts on traffic. As is discussed below, this loading zone should also be extended to an all-day (6:00AM to 5:00PM) loading zone.
- › **14 West Patrick Street:** maintain this loading zone as-is; the two adjacent businesses are banks, so it is likely that the vehicles loading and unloading are armored trucks, which are shorter than 30' single unit delivery trucks and can probably be adequately accommodated in the existing space.
- › **66 South Market Street:** lengthening this loading zone northwards by one space would better accommodate trucks without inhibiting emergency egress from the fire station but would have the drawback of effectively eliminating a full-day retail parking space in front of 52 South Market. Therefore, the best strategy to mitigate this loading zone is to increase enforcement against delivery vehicles hanging over the south end of the loading zone to ensure that fire trucks can always exit the fire station. When the development proposed for this location is constructed, there will be 27 on-site parking spaces and the one on-street space may be a better candidate for conversion into a loading zone space.<sup>2</sup>

## Loading Zone Hours

Loading zones should be designated during the time of day when they are most likely to be used and the competition for curb space is most intense. For example, restaurants tend to receive most of their deliveries before 10:00 AM or between 2:00 PM and 4:00 PM to avoid peak dining periods, while retail and office land uses typically do not receive delivery/pick-up service before 9:00 AM or after 4:00 PM. Customers and curbside drop-offs for Uber, Lyft, etc. should be able to use on-street spaces when not needed for loading and unloading. These spaces can also be freed up for patrons or to create space along the sidewalk for other uses.

## Existing Conditions

The City's policy is to maintain no more than two different sets of loading zone hours in order to make the curbside parking system as easy to understand as possible for Downtown visitors. Of the 65 parking spaces in the study area to which loading zone restrictions apply, 27 are restricted from 6:00 AM to 5:00 PM, and the remaining 38 are restricted from 6:00AM to 10:00AM. These loading zone hours apply on blocks with the following predominant business types:

Block Characterization	6AM to 10AM	6AM to 5PM	Total
Office	4		4
Office and Retail	6		6
Restaurant		6	6
Restaurant and Retail	18	17	35
Restaurant, Office, and Retail	7		7
Retail	3	4	7
<b>Total</b>	<b>38</b>	<b>27</b>	<b>65</b>

Loading zone hours that do not match the use types that characterize each block face are shaded in blue.

## Assessment

These conditions are generally acceptable. A majority (65 percent) of loading zones match their noted block characterization. However, 6:00AM to 5:00PM is a long period of time for a loading zone near restaurant uses, which typically do not receive deliveries between 10:00 AM and 2:00 PM. Office and retail uses typically receive

<sup>2</sup> The development is exempt from minimum parking requirements per Sec. 607(C)(2) of the Land Management Code



deliveries between 9:00 AM and 4:00PM, so loading zone restrictions before 9:00 AM on exclusively office or retail blocks are of minimal utility. In addition, as mentioned above, business owners reported a greater need for afternoon loading zone time on North Market Street. Specifically, the 200 block of North Market Street has three loading zones, all of which apply only from 6:00AM to 10:00AM.

## Recommendations

The mix of business types in close proximity and the desire to facilitate parking once and delivering to multiple businesses within Downtown Frederick call for flexibility in setting loading zone hours in relation to nearby business uses. However, adjustments to existing conditions should be made adjacent to office and retail uses to permit daytime deliveries such as including document and parcel deliveries from UPS, FedEx, and Amazon Prime, as well as to reduce traffic impacts of delivery on North Market Street during the afternoon. The following recommendations were developed through the assessment team's reallocation exercise and support those specific change objectives.

### *Adjustments adjacent to office and retail uses to permit daytime deliveries*

- › **14 West Patrick St:** extend the hours of this 26-foot loading zone to accommodate daytime armored truck loading and unloading at the three nearby banks.
- › **115 West Patrick St:** extend the hours of this 60-foot loading zone to accommodate daytime parcel and document deliveries at the offices contained within the building. Daytime parking for the offices can be accommodated by the private parking lots located and adjacent to the building.

### *Adjustments to reduce afternoon traffic impacts along North Market Street*

- › **1 East Church St:** extend the hours of this 67-foot loading zone, which is located immediately east of the 100 block of North Market Street and reduce the hours of the nearby 101-foot loading zone located at 112-118 North Market Street. This will have the effect of transferring afternoon loading off Market Street, reducing traffic impacts of trucks backing along Market as well as as providing additional parking for customers along Market during the afternoon. The two-story 8,000 SF office space addition proposed for this location may lead to additional demand for daytime deliveries.
- › **220-228 North Market St:** consolidate these two 6:00AM to 10:00AM loading zones into one 6:00AM to 5:00PM loading zone. This will provide additional afternoon loading zone time along North Market, reducing the likelihood that delivery trucks will double-park and obstruct traffic during the afternoon.
- › **1 West 2<sup>nd</sup> St and 207 North Market St:** the 1 West 2<sup>nd</sup> St loading zone should be extended to an all-day loading zone in order to accommodate demand for afternoon deliveries along North Market with less traffic and parking impacts than adding afternoon loading zones along North Market. As discussed above, the 1 West 2<sup>nd</sup> St. loading zone should be lengthened, and the 207 North Market St. loading zone should be shortened.
- › **105 North Market St:** extend the hours of this 120.5-foot loading zone while reducing its length by at least one space. This will provide additional loading zone space along North Market Street in the afternoon while mitigating the loss of parking.
- › **319-325 North Market St:** extend the hours of this 68-foot loading zone while reducing its length by removing the south space from the loading zone. This will provide additional loading zone space along North Market Street in the afternoon while mitigating the loss of parking. There is additional parking in this area in the North Market municipal lot. Alternatively, the North Market municipal lot could be reconfigured to provide an off-street loading zone within the lot, and all the street parking spaces currently contained in the 319-325 North Market St loading zone could revert to full-time parking use.

## Loading Zone Signing

Loading Zone signs should be clear and concise, and pavement markings should be used wherever possible to clearly distinguish areas for commercial vehicle loading.

## Existing Conditions

A variety of different loading zone sign types are used depending on the context of the individual loading zone. In some cases, signs with no arrow or double-headed arrows are placed at intermediate locations within the loading zone, while in other cases, signs with single-headed arrows are placed at the ends of the loading zone.

## Assessment

Loading zone signs currently do not meet best practices. In general, existing loading zone signs provide easy-to-understand guidance on the hours of loading zone parking restrictions. In some cases, parking meters also provide guidance on loading zone hours. However, the signs do not always adequately describe the extent of loading zones, and there are no pavement markings to provide positive guidance to vehicle operators.

The Maryland Manual on Uniform Traffic Control Devices (MdMUTCD) provides guidance that “the **limits** of [a parking] restriction should be shown by arrows or supplemental plaques” (emphasis added), which the existing signing for loading zones in Downtown Frederick typically does not do.



For example, many loading zones include signs located at an intermediate point along the loading zone curb with a double-headed arrow (at right), but do not include signs at each end with single-headed arrows that clearly define the end of the loading zone parking restriction area. Although some loading zones include one end sign with a single-headed arrow, no loading zones within the study area had single-headed-arrow signs at both ends of the loading zone.



Some loading zone signs have a “Saturday Parking One Hour Only” attached (at left). It is unclear whether this applies to the loading zone only or to the whole side of the street.



In some cases, loading zones include marked buffer zones ahead of or behind parking spaces that provide additional space for unloading deliveries (right). However, it is not always clear that parking is prohibited in these buffers during loading zone hours.

In one case (7 East Patrick Street, shown at left), a loading zone sign has a double-headed arrow, but only one of the two parking meters attached to the same pole indicates that parking is prohibited from 6:00AM to 10:00AM.





## Recommendations

In order to clarify loading zone limits, signs with single-headed arrows should be installed at each end of every loading zone. In addition, simplifying loading zone text can make the signs easier to understand for visitors.

The proposed sign design, shown below, would simplify the text by replacing the words “No Parking” with the typical “No Parking” icon that is common in Downtown Frederick on signs such as those prohibiting overnight parking for street sweeping or near commercial driveways.



*Double-headed arrow sign for use at intermediate locations within loading zones*



*Single-headed arrow sign used to demarcate limits of loading zones*

## Off-Street Loading

The most effective means of reducing curbside conflict is for commercial vehicles to load and unload off street. This is particularly difficult in historic areas where alleys, if they exist, are narrow and do not necessarily connect through to another street. Parking garages, parking lots and municipal facilities also provide an opportunity for consolidated pick-up and delivery.

### Existing Conditions

There is only one true off-street loading zone currently within the study area: Market Space in the 100 block of North Market Street.

### Assessment

Most alleys in Downtown Frederick are too narrow for deliveries (example at right) or are used as privately-owned parking. However, there are two large loading zones—one along Citizens Way between across from the Court Street garage, and another along Carroll Creek Way across from the Carroll Creek garage—that have many of the attributes of off-street loading zones: they provide ample space, do not conflict with much other pedestrian or vehicular traffic, and are allocated to loading and deliveries at all times.



April 12, 2020

## Recommendations

The loading zones along Citizens Way and Carroll Creek Way appear to be underutilized assets that—with communication and encouragement of delivery services—could reduce the demand for unloading on Market and Patrick Streets. Frederick should work to expand lines of communication with delivery services to make them aware of all available off-street loading zones and encourage the services to use these zones.

*Existing loading zones along Citizens Way and Carroll Creek Way*



Finally, Frederick should encourage consolidated parcel delivery, such as Amazon Locker, to reduce on-street impacts of short-term parcel deliveries. If an Amazon Locker is installed in the Downtown area, the City could encourage businesses to use it by offering discounted “Park and Shop” tickets to establishments that agree to have their deliveries made to a consolidated location.

## New Developments

The Frederick Land Management Code Sec. 607(h) states that "The City finds and determines that in some areas and structures, such as the City's historic downtown and small building modules, the public interest of minimizing impervious surface and promoting compact design outweighs the need for off-street loading. Accordingly, these areas are exempt, or subject to minimal off-street loading requirements." The same section contains specifications for "large" (15' H x 12' W x 50' L) and "small" (10'H x 9' W x 20' L) loading zones, and a table (Table 607-4) specifying how much loading space is required for developments not within exempt areas.

Use Classification	Gross floor area (square feet)	Minimum Loading Space Requirements
Retail, office or industrial uses	>2000 but <5,000	1 small
Retail	5,000—40,000	1 large
Retail	over 40,000	1 large + 1 per each additional 40,000 square feet
Office	5,000—100,000	1 large
Office	over 100,000	1 large + 1 per each additional 40,000 square feet
Industrial and wholesale	5,000—40,000 square feet	1 large
Industrial and wholesale	40,000—100,000 square feet	2 large
Industrial and wholesale	100,000—160,000 square feet	3 large
Industrial and wholesale	160,000—240,000 square feet	4 large
Industrial and wholesale	240,000—320,000 square feet	5 large
Industrial and wholesale	320,000—400,000 square feet	6 large
Industrial and wholesale	Each 90,000—above 400,000 square feet	1 large



The City should assess developments proposed within Downtown to determine whether the amount of loading space that would be required outside of Downtown is provided within a one-block radius of the proposed development at hours that will serve the proposed development, and make changes to on-street loading zones as necessary.

Two Downtown developments represent this issue:

- › At 100 North Market Street, an 8,000 SF office addition is proposed for an existing building. Outside of Downtown, that addition would require one large loading space per table 607-4. Because the development is within Downtown, it will be able to use the existing 67-foot loading zone at 1 East Church Street, but hours should be extended to the full day to provide daytime delivery space for the office use.
- › At 46 South Market Street, an existing building is proposed to be expanded from 7,714 SF to 11,332 SF to contain restaurant, office, and distillery uses. This building would require one large loading space per table 607-4, but the adjacent 6AM to 5PM on-street loading zone at 66 South Market Street is only 41 feet long. Therefore, the City should require lengthening of that loading zone, with the loss of one parking spaces mitigated by new off-street parking created by the development.

## Amazon Lockers

### About Amazon Lockers

Amazon Lockers are secure consolidated parcel delivery centers that receive packages originating from or fulfilled by Amazon. Most commonly located in grocery and convenience stores, they are accessed via 6-digit codes emailed to recipients after packages are delivered and can accept packages up to 10 lbs. and 16 x 12 x 14 inches. Amazon Lockers provide security for parcel recipients because delivery to a Locker means that package theft is much less likely to occur. Essentially, Amazon Lockers allow customers to forego the convenience of home or office delivery in exchange for a secure delivery. Consolidating parcel delivery at a Locker provides an additional benefit for the locality: instead of making numerous curbside stops to deliver packages, possibly double-parking or blocking traffic in the process, delivery vehicles make one stop—likely in an off-street location—at the Locker. An Amazon Locker serving Downtown Frederick would have the potential to reduce double-parking and idling of delivery vehicles, decrease package theft from residential doorsteps, and provide a convenient location for Amazon customers to drop off packages for return, even if the parcels were originally delivered to a residential or commercial address.

*Example of Indoor Amazon Locker (Pikesville, MD)*



This section will present the case that Frederick should pursue at least one Amazon Locker to serve the Downtown area, review key considerations for selecting a location for an Amazon Locker to serve Downtown Frederick, outline the process for requesting a Locker, review potential locations for a Downtown Locker, and provide a recommendation that the City request Amazon Lockers at two locations: **at the Church Street Garage and outside the Frederick MARC station.**

### The Case for an Amazon Locker for Downtown Frederick

There are currently no Amazon Lockers located in or near Downtown Frederick. The closest are located at the Giant Eagle supermarket in the Frederick Shopping Center on West 7<sup>th</sup> Street, at the 7-Eleven on the Golden Mile at the intersection of Route 40 and Hoke Place, and at the Francis Scott Key Mall (see map at right).

The Frederick area has fewer Amazon Lockers than other locales in Maryland of similar size; Gaithersburg has eight Amazon Lockers, Rockville has thirteen, and Annapolis has seven.

In addition, the built environment in Downtown Frederick, especially at residential properties, provides limited opportunities for secure package delivery at doorsteps. Most residences do not have garages or enclosed porches, and a package thief walking along a residential street near Downtown Frederick merely has to take a few steps off the sidewalk to snatch a package off a front stoop—less effort and less likely to be noticed than walking up a large driveway (as is typically necessary to steal a package in a suburban area). Therefore, independent of package delivery to businesses, there is likely enough demand for secure residential package delivery to support Amazon Lockers in or near Downtown Frederick.

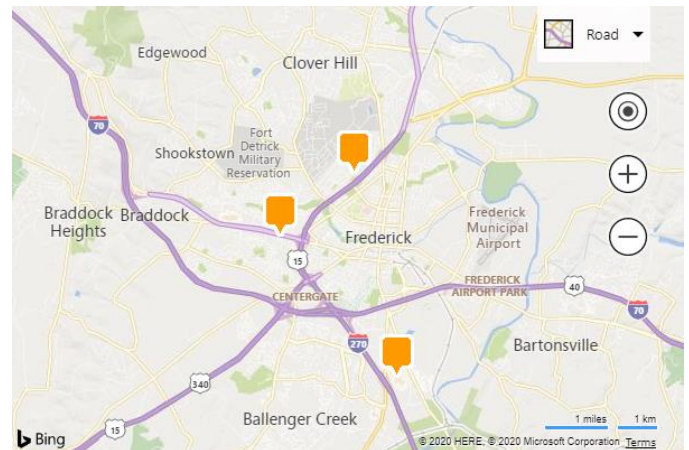
### Key Considerations

The following considerations should inform the selection of a preferred location for an Amazon Locker to serve Downtown Frederick:

#### Security

By their nature, Amazon Lockers are less susceptible to package theft than doorsteps; they cannot be easily broken into, require a 6-digit code to unlock, and the packages inside are not visible to potential thieves. Nevertheless, there are several factors that can affect the level of security associated with an Amazon Locker. Security cameras should monitor the Locker for suspicious activity, and Lockers should be situated in a visible location so that a determined thief would not be able to spend enough time to break into the Locker without a passerby seeing and alerting the authorities. For the same reason, locating a Locker in a visible location also makes customers more comfortable with regards to

**Current Amazon Locker Locations near Frederick**



**Example of Outdoor Amazon Locker (Brookfield, WI)**



<https://www.youtube.com/watch?v=VvkMaZ5ypxo>

their personal safety. While they may be less visible from sidewalks or public areas, indoor locations have the benefit of an additional layer of security associated with the business or facility in which they are located.

### *Ease of Access*

An Amazon Locker should be easy to access; otherwise, residents and businesses will continue to have packages delivered to their own location.

If the primary users of an Amazon Locker in Downtown Frederick are expected to be businesses, a location close to the business core on Patrick and Market would be preferred. However, based on conversations with stakeholders and the fact that residents worried about doorstep package theft are likely to prefer having parcels delivered to a secure location, it is expected that the primary users of an Amazon Locker in Downtown Frederick would be residential. Therefore, a preferred location should be easily accessible from residential areas, especially those north of Church Street east and west of Market Street. Ease of access also means that a location should not have limited hours and should not require going past the lobby or atrium of a building.

### *Ease of Delivery*

Consolidated parcel delivery has the potential to reduce delivery trucks' need for roadway space along Downtown Frederick streets. While much of this opportunity comprises a reduction in parked or idling delivery vehicles, consolidating parcel delivery at an Amazon Locker that is on the edge of Downtown Frederick—rather than at its core—means that vehicles delivering packages to the Locker would have less need to travel on Downtown streets. Even if a Locker is located within the core of Downtown Frederick, it should have an off-street loading zone nearby, so that trucks and vans do not occupy roadway lanes or parking spaces while making deliveries to the Amazon Locker.

## Requesting an Amazon Locker

Amazon has an online form to register interest in hosting an Amazon Locker. The form should be filled out by “the owner of [the] property and/or the main decision maker about whether the property can host an Amazon Locker.” Therefore, in the case of a City-owned garage or other property, the City would be the best entity to submit the request, but requesting an Amazon Locker at a non-City-owned property—such as a private business, the County courthouse, or the post office—would require coordination with the property owner.

## Potential Locations

### *City-Owned Garages*

- › Carroll Creek Garage at 44 East Patrick Street
  - **Advantages:** close to Patrick Street and South Market Street businesses, as well as Carroll Creek businesses and residences; delivery trucks can use the 122' Carroll Creek Way loading zone to unload parcels into the Locker without obstructing street traffic or circulation within the parking garage
  - **Disadvantages:** fewer nearby residences than at other locations
- › Church Street garage at 17 East Church Street
  - **Advantages:** close to Market Street businesses; closer to residences along Church, 2<sup>nd</sup>, and 3<sup>rd</sup>; delivery trucks can use the 58' Market Space loading zone to unload parcels into the Locker without obstructing street traffic or circulation within the parking garage
  - **Disadvantages:** greater distance from Patrick Street businesses; access requires travelling through downtown streets for a greater distance
- › Court Street garage at 2 South Court Street
  - **Advantages:** close to Patrick Street and South Market Street businesses, as well as Carroll Creek businesses and residences; delivery trucks can use the 60' Citizens Way loading zone to unload parcels into the Locker without obstructing street traffic or circulation within the parking garage
  - **Disadvantages:** greater distance from North Market Street businesses; fewer nearby residences than at other locations
- › East All Saints Street Garage at 125 East All Saints Street

- **Advantages:** access from I-70 requires the least driving on downtown streets
- **Disadvantages:** greater distance from businesses on Patrick and Market; no apparent off-street unloading available nearby
- › West Patrick Street garage at 138 West Patrick Street
  - **Advantages:** close to residences on West Patrick; off-street unloading available along courthouse driveway; access from I-70 requires minimal driving on downtown streets
  - **Disadvantages:** greater distance from businesses on Patrick and Market

### *Other Public Facilities*

- › C. Burr Artz Public Library at 110 East Patrick Street
  - **Advantages:** indoor atrium; close to Patrick Street and South Market Street businesses, as well as Carroll Creek businesses and residences; delivery trucks can use the 122' Carroll Creek Way loading zone to unload parcels into the Locker without obstructing street traffic
  - **Disadvantages:** limited hours (10a – 9p Mon-Thurs; 10a – 5p Fri-Sat; 1p – 5p Sun); fewer nearby residences than at other locations
- › Frederick County Courthouse at 100 West Patrick Street
  - **Advantages:** secure indoor location; off-street unloading available along courthouse driveway; access from I-70 requires minimal driving on downtown streets
  - **Disadvantages:** foot traffic to Locker may be disruptive to courthouse business; unknown if adequate space is available in an accessible location
- › Frederick MARC station at 100 South East Street
  - **Advantages:** secure indoor location; access from I-70 requires minimal driving on downtown streets; convenient for transit and MARC riders
  - **Disadvantages:** greater distance from businesses on Patrick and Market; limited indoor hours (Mon to Fri, 4:45a – 9:30a and 1p – 8:30p)
- › US Post Office at 201 East Patrick Street
  - **Advantages:** secure indoor location; lobby open 24/7; reduce redundant delivery trips for packages delivered by USPS vehicles; access from I-70 requires minimal driving on downtown streets
  - **Disadvantages:** greater distance from businesses on Patrick and Market; trucks prohibited on North Carroll Street which may complicate access

### *Businesses*

- › 7-Eleven at 501 North East Street
  - **Advantages:** indoor, 24-hour location; many Amazon Lockers at other 7-Eleven locations
  - **Disadvantages:** greater distance from the business core on Patrick and Market

### *Recommended Locations*

As discussed above, residential Amazon customers are likely to be primary users of an Amazon Locker in Downtown Frederick, so a recommended location should be accessible for residential as well as commercial customers. Lockers should always be visible to passersby, and they should not require on-street unloading. Based on these considerations, many of the above-listed locations are feasible, but the following two are particularly recommended, and the strengths of each are complementary.

### *Church Street Garage*

The Church Street Garage is close to the Market Street and Patrick Street commercial core but is also easily accessible from the residential streets from Church northwards. Nearby restaurants are open late; the White Rabbit is open until 12:00am every day and Brewers Alley is open until 2:00am on weekends, while Starbucks opens at 5:00am on weekdays and 6:00am on weekends. Therefore, there is never a period of more than five hours when a nearby business is not open. The loading zone on Market Space is close to the north end of the garage and provides a convenient location for delivery drivers to leave their vehicles that has minimal impact on traffic. Therefore, an Amazon Locker at this location would serve residential and commercial customers in a convenient, secure manner that does not result in new on-street unloading.



Possible locations for a Locker at the Church Street garage include the following:



***In Brewers Alley adjacent to existing mailboxes***

**Advantages:** ADA accessible location that is within sight at many hours of the day and night and view of security cameras.

**Disadvantages:** Location is on private property, requiring coordination with property owner, is outdoors and exposed to the elements, and would be served by the on-street loading zone on North Market Street.



***On the ground floor of Stair 2 within the Church Street Garage***

**Advantages:** ADA accessible location that is on public property, is completely protected from the elements, and would be served by the off-street loading zone on Market Space.

**Disadvantages:** Locker would be limited in size due to the constraints of the space, and the location is in an out-of-sight stairwell that is not covered by security cameras.



***On the ground floor of the Church Street Garage adjacent to the entrance***

**Advantages:** Location that is somewhat protected from the elements, is easily within sight of the garage entrance, is on public property, could accommodate a larger Amazon Locker than the stairwell location, and would be served by the off-street loading zone on Market Space.

**Disadvantages:** Location is not fully protected from the elements, is not ADA accessible, and is not level.

***Frederick MARC Station***

An outdoor Amazon Locker at the Frederick MARC station would be easy to access on foot and via transit and would be particularly convenient for the MARC and TransIT passengers who begin their trip or transfer buses at the Transit Center. An outdoor Locker is recommended because the indoor lobby of the station is only open from 4:45 to 9:30am and 1:00 to 8:00pm on weekdays and even more limited hours on weekends. However, the first MARC train leaves for Washington at 5:00am and Frederick County TransIT service operates continuously from

approximately 6:00am until 9:15pm, so there are eyes on the station for more than 16 hours each weekday. In addition, security cameras at the station monitor for suspicious activity.

A vehicle delivering packages to the Locker would be able to access the station via South East Street, avoiding other Downtown streets. However, locations for delivery drivers to leave their vehicles while depositing parcels into the Locker and for Amazon customers to leave their cars for five minutes or less while retrieving parcels would both need to be agreed upon.

Once these are resolved, an Amazon Locker at this location would be secure, convenient—especially for MARC and TransIT passengers—and easy to access for deliveries.

### Amazon Locker Next Steps

Due to its constrained built environment and lack of existing parcel delivery locations, the Downtown Frederick area has a need for consolidated parcel delivery locations. The right location(s) should take into consideration ease of access for customers, ease of delivery for drivers, and security to avoid package theft. Two locations near Downtown Frederick present the best opportunity to provide convenient, secure package pickup for all residents and businesses in the area: the Church Street Garage and the Frederick MARC station.

If the City concurs with these recommended locations, it should take the following steps:

#### *Church Street Garage*

- › Perform a site visit with the Planning Department and Parking Department to identify the best location within the garage
- › Submit a formal request to Amazon for an Amazon Locker at the location

#### *Frederick MARC Station*

- › Perform a site visit with the Planning Department and Public Works Department to identify the best location at the station for the Locker, as well as to identify locations for delivery drivers and Amazon customers to leave their vehicles while depositing or retrieving parcels from the Locker
- › Submit a formal request to Amazon for an Amazon Locker at the location

These steps will start the process to add Amazon Lockers to serve Downtown Frederick and will support the City's efforts to reduce traffic congestion, mitigate curbside conflicts, and decrease frequency of package theft.

## Ride-Hailing

Frederick currently provides taxi stands (defined in City code in 2018 as "Vehicle Stands") throughout Downtown that operate from 9:00PM to 3:00AM, reserving strategically located parking spaces for attended waiting of vehicles for hire for up to 15 minutes.<sup>3</sup> These taxi stands are a successful strategy to ensure that Downtown visitors have a safe ride home. Since the advent of ride-hailing services, however, licensed taxicabs are less likely to be the ride home of choice for Downtown visitors.

Stakeholders have reported that ride-hailing vehicles tend to wait for fares in travel lanes, obstructing traffic and sometimes contributing to hazardous conditions for turning vehicles. For example, Downtown Frederick Partnership staff reported that ride-hailing vehicles often wait in the left travel lane of the 100 block of North Market Street, and drivers turning left from Church Street have to stop suddenly. These problems are most frequent on Friday and Saturday evenings, when loading zones are inactive and there is the highest demand for taxi and ride-hailing services.



<sup>3</sup> City of Frederick Code of Ordinances, Sec. 23-36, inserted into the Code via Ord. No. G-18-22 in fall 2018



During daytime hours, Uber and Lyft vehicles (and taxis) are specifically prohibited from picking up or discharging passengers in loading zones.<sup>4</sup> City code classifies ride-hailing services (known as in code as “Transportation Network Services”) as vehicles for hire, a category that also includes traditional taxicabs,<sup>5</sup> and permits them to use vehicle stands.

Therefore, the City should make it clear that ride-hailing services are permitted users of taxi stands by revising taxi stand signs to inform ride-hailing drivers that they are permitted or encouraged to wait there for fares, and provide off-street space just outside the core of Downtown Frederick for ride-hailing vehicles to wait for more than 15 minutes until they have a pending passenger. Per City code, taxicabs may stop within a street to pick up or discharge passengers,<sup>6</sup> but ride-hailing vehicles do not have the same privilege, further increasing the need for designated drop-off and pick-up zones for ride-hailing services.



The City could also consider working with Uber and Lyft to geofence the taxi stands as the only available ride-hailing pickup locations within Downtown Frederick. This step, which has been implemented in other cities,<sup>7</sup> has been shown to reduce the number of drop-offs and pickups made from the travel lane and reduce the average amount of time needed for a dropoff or pickup. This may also result in fewer ride-hailing vehicles “cruising” while waiting for a fare, reducing traffic congestion and emissions.

## Conclusion

Downtown Frederick is a vibrant locale where shoppers, diners, and residents visit restaurants, shops, cafés, and offices, arriving by their own cars, via ride-hailing and transit, on foot, and by bicycle. However, this vibrancy and activity means that pedestrians, bicyclists, drivers, and delivery workers must frequently share the curbside, and the City must therefore manage the curbside to its highest and best use that balances the needs of all user groups.

The City’s present curbside management program adequately serves businesses’ and delivery services’ needs, and no changes are necessary at the present time. However, the strategic adjustments described above could further improve curbside operations in Downtown Frederick, and steps to provide consolidated parcel delivery and better regulate ride-hailing services like Uber and Lyft could reduce traffic impacts of deliveries, drop-offs, and pickups in Downtown Frederick. In addition, newly-reclaimed curbside parking could be transformed into a “Parklet” on a temporary (top) or semi-permanent (bottom) basis. With these steps, Frederick can provide additional parking, more space for sidewalk dining, or designated locations for Uber and Lyft to drop off or pick up passengers, and thus is well-positioned to modernize its Downtown curbside management and freight delivery.



















































<sup>4</sup> City of Frederick Code of Ordinances, Sec. 13-42

<sup>5</sup> City of Frederick Code of Ordinances, Sec. 23-1

<sup>6</sup> City of Frederick Code of Ordinances, Sec. 23-27

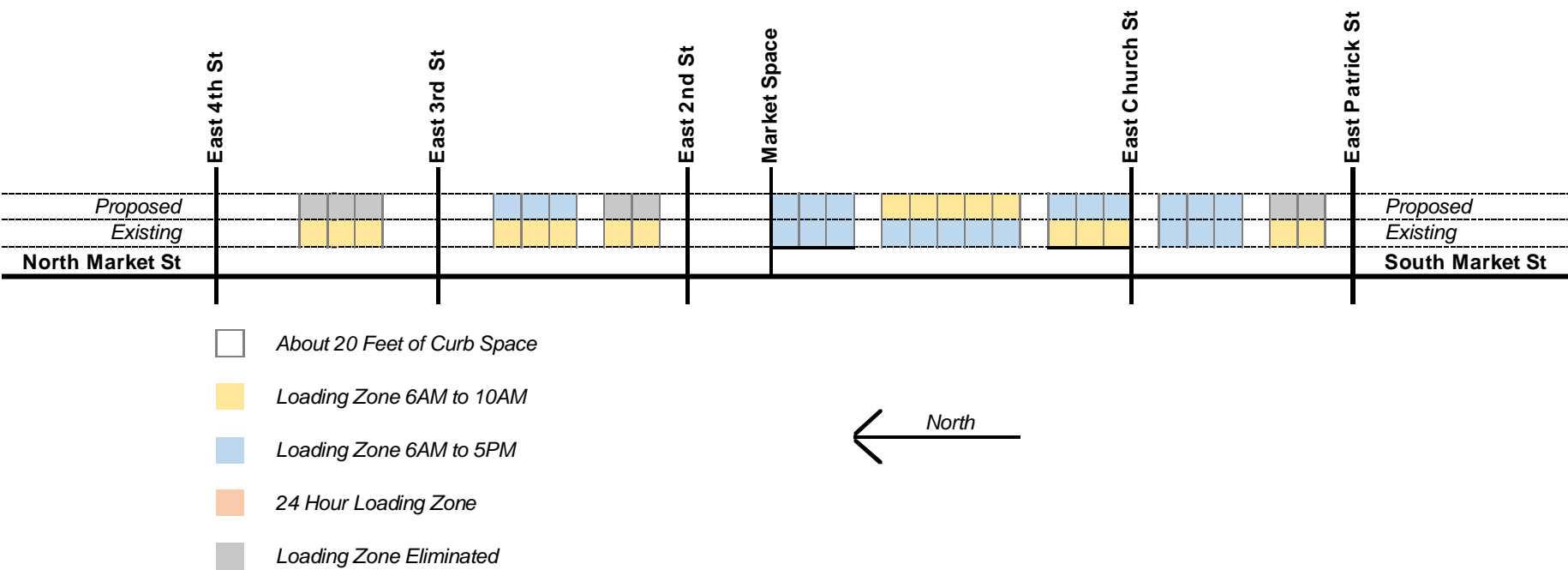
<sup>7</sup> For example, Goodchild, A. et al (2019). *Curb Allocation Change Project Final Report*, [http://depts.washington.edu/sctlctr/sites/default/files/Curb\\_Allocation\\_Change\\_Project-UWUrbanFreightLab.pdf](http://depts.washington.edu/sctlctr/sites/default/files/Curb_Allocation_Change_Project-UWUrbanFreightLab.pdf).

## Appendix A: Loading Zones Table

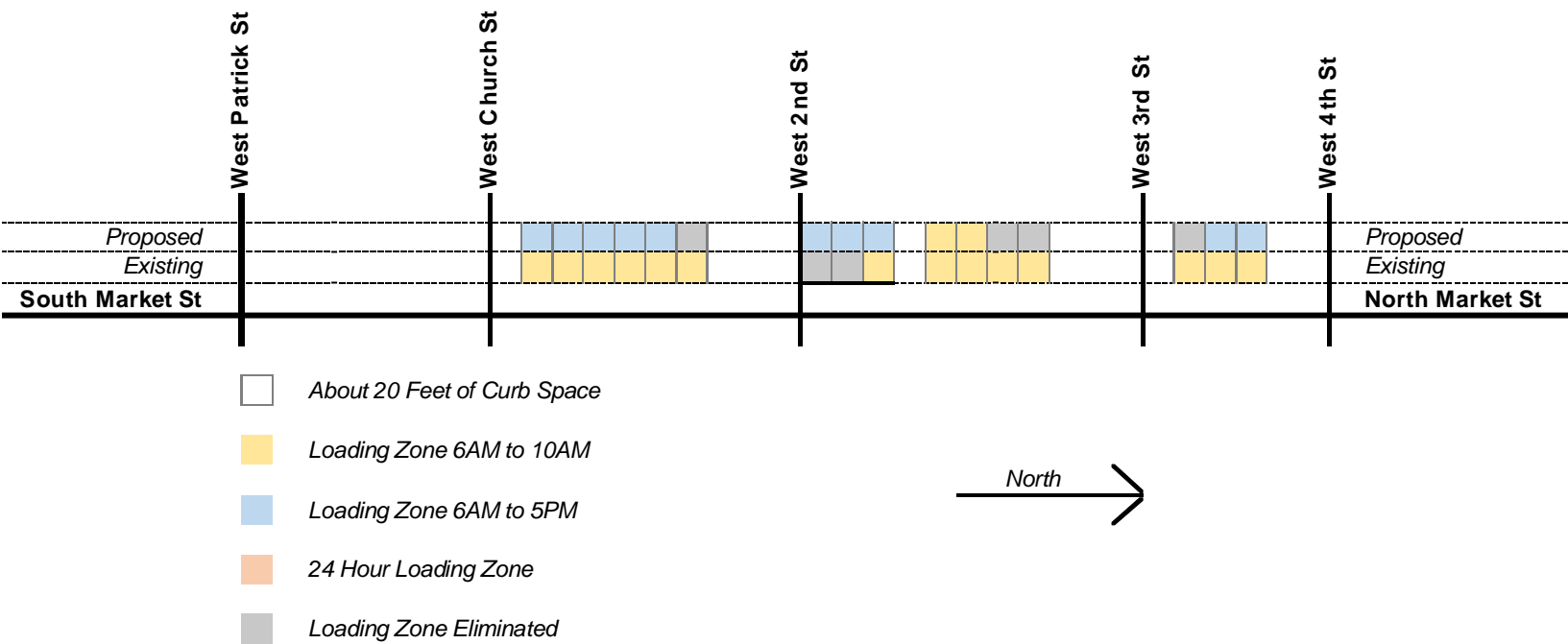
		Loading Zone Description		Loading Zone Hours (Mon-Fri)	
	Location	Block Character	Length (Dashed Line: 45')	Existing Parking Spaces	Current Proposed
East Side of North Market	22-26 North Market Street	Restaurant and Retail	49 	2 	6AM to 10AM Eliminate
	30 North Market Street	Restaurant and Retail	61 	3 	6AM to 5PM 6AM to 5PM
	1 East Church Street	Retail	67 	3 	6AM to 10AM 6AM to 5PM
	112-118 North Market Street	Restaurant and Retail	101 	4 	6AM to 5PM 6AM to 10AM
	Market Space	Restaurant	58 	3 	6AM to 5PM 6AM to 5PM
	220 North Market Street	Restaurant and Retail	44 	2 	6AM to 10AM Eliminate
	228 North Market Street	Restaurant and Retail	54 	2 	6AM to 10AM 6AM to 5PM
	314 North Market Street	Office and Retail	63.5 	3 	6AM to 10AM Eliminate
	526 North Market Street	Restaurant and Garage	N/A	N/A	N/A N/A
West Side of North Market	105 North Market Street	Restaurant and Retail	120.5 	5 	6AM to 10AM 6AM to 5PM
	1 West 2nd Street	Office	25.5 	1 	6AM to 10AM 6AM to 5PM
	207 North Market Street	Restaurant and Retail	86 	4 	6AM to 10AM 6AM to 10AM
	319-325 North Market Street	Office and Retail	68 	3 	6AM to 10AM 6AM to 5PM
	535 North Market Street	Firehouse	N/A	N/A	N/A N/A
Patrick Street	115 West Patrick Street	Office	60 	2 	6AM to 10AM 6AM to 5PM
	31 West Patrick Street	Retail	72 	2 	6AM to 5PM 6AM to 5PM
	14 West Patrick Street	Office	26 	1 	6AM to 10AM 6AM to 5PM
	7 East Patrick Street	Restaurant and Retail	62 	3 	6AM to 10AM 6AM to 10AM
	16 East Patrick Street	Restaurant and Retail	44 	2 	6AM to 5PM 6AM to 5PM
	32 East Patrick Street	Restaurant and Retail	90 	4 	6AM to 5PM 6AM to 5PM
	111 East Patrick Street	Restaurant and Retail	80 	4 	6AM to 5PM 6AM to 5PM
South of Patrick	22 South Market Street	Restaurant, Office, and Retail	98 	4 	6AM to 10AM 6AM to 10AM
	39 South Market Street	Restaurant, Office, and Retail	93.5 	3 	6AM to 10AM 6AM to 5PM
	50 Carroll Creek Way	Restaurant and Office	122 	N/A	24 Hours 24 Hours
	50 Citizens Way	Restaurant and Office	60 	N/A	24 Hours 24 Hours
	66 South Market Street	Retail	41 	2 	6AM to 5PM 6AM to 5PM
	6 East South Street	Restaurant	66 	3 	6AM to 5PM 6AM to 10AM



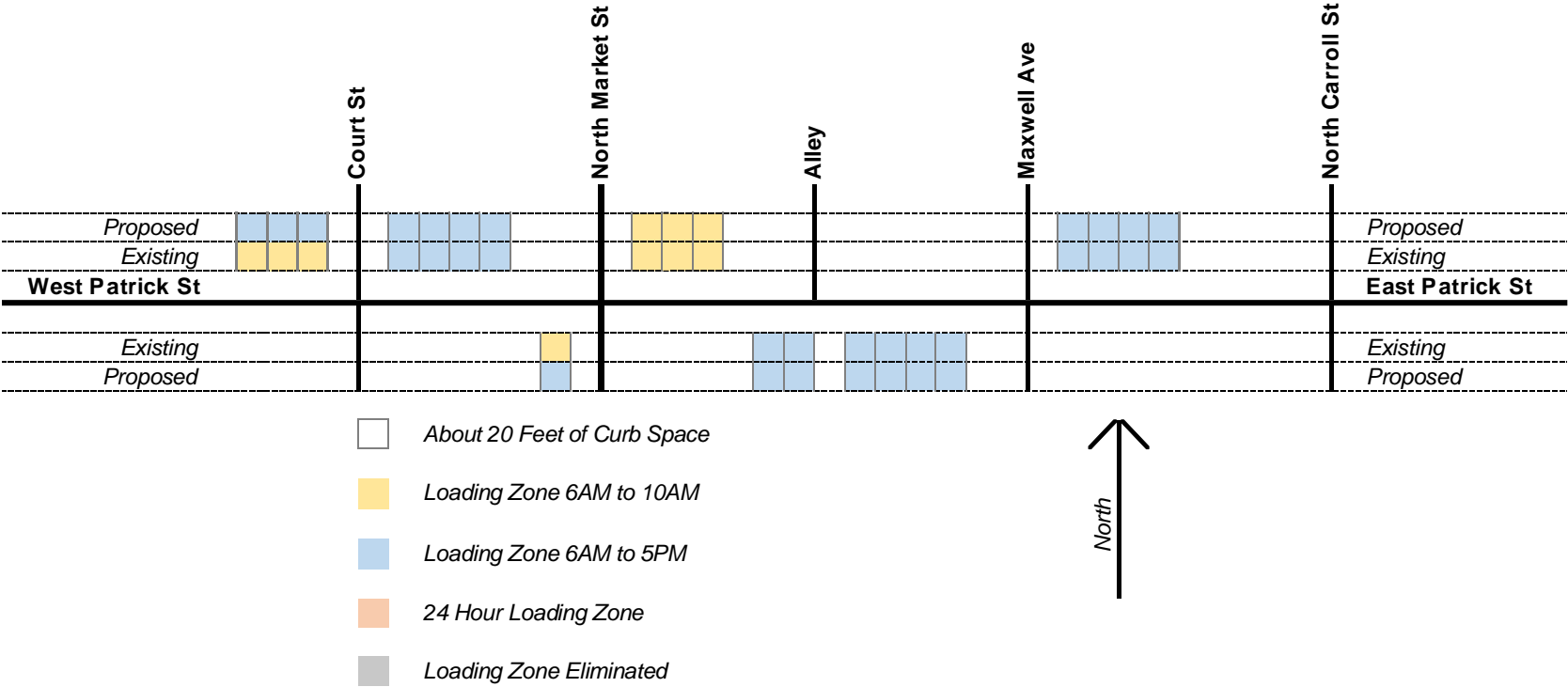
Appendix B: Loading Zone Changes  
East Side of North Market Street



West Side of North Market Street



Patrick Street



South of Patrick Street

