

Addressing the Excess: Reversing the Repercussions of Parking Space Minimum Requirements

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I. Introduction

Although often overlooked as a convenient part of everyday life, the over-availability of parking spaces can severely harm the environment, negatively impact public health, and place an economic burden on local businesses. Municipalities' off-street parking space minimums often require more spaces than necessary. This leads to seas of asphalt that raise the surrounding area's temperature to create an urban heat island.¹ Encouraging the use of combustion-engine vehicles ultimately leads to an increase in greenhouse gas emissions and unhealthy air quality.² Air quality is of particular concern to Carlisle Borough, which is surrounded by major highways with daily truck traffic.³ The local air quality has suffered as a result: in 2018, the Carlisle-Harrisburg area experienced 114 days of unhealthy air quality.⁴ This issue is likely to worsen for Carlisle, as more warehouses are being constructed in the Borough, and as neighboring I-81 expands to six lanes.⁵

Carlisle's Climate Action Committee is seeking to lower the Borough's carbon footprint by discouraging the overuse of traditional fuel-burning vehicles.⁶ The first step is focusing on what is within the Borough's immediate control: revising its parking ordinance. Carlisle's

¹ EPA, *Parking Spaces / Community Places: Finding the Balance through Smart Growth Solutions*, (2006) at 11.

² *Id.*

³ Karla Browne, "Study: Truck Traffic Here to Stay," *The Sentinel*, 8 April 2006.

⁴ Nora Shelley, "Air pollution in PA: How many days did you breathe polluted air in 2018?," *Lebanon Daily News*, Jan. 28, 2020. <https://www.ldnews.com/story/entertainment/2020/01/28/air-quality-pa-report-indicates-central-pa-air-often-polluted-penn-environment-report-2018/4588475002/>.

⁵ Steve Marroni, "More warehouses, traffic, prompt plan to widen I-81 to 6 lanes," *PennLive*, Jan. 15, 2019. <https://www.pennlive.com/news/2019/01/more-warehouses-traffic-prompt-plan-to-widen-i-81-to-6-lanes.html>.

⁶ Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

current, outdated parking ordinance ultimately fails to encourage sustainable transportation options, such as electric vehicles, and results in the waste of land that otherwise could have been used to support the environment and promote public health.

Key elements other ordinances have implemented include reducing the amount of minimum parking spaces required in general, eliminating the minimum requirement in downtown areas, and implementing maximum parking space limits. Other ordinances have focused on supporting small businesses through parking exemptions to help those businesses save money. Additionally, these ordinances have recognized that certain residential areas still require minimum parking, though at a lower threshold, in order to ensure their residents have parking. In some instances, municipalities have reduced the number of required parking spaces simply by adding one sentence to their parking ordinance.

Reducing or eliminating the minimum parking requirement in downtown areas allows developers more space for creativity and more flexibility to create projects that result in more affordable housing. Additionally, local businesses are able to expand in more meaningful ways, providing residents with a wider variety of entertainment and restaurant options. Reducing minimum parking also reduces people's reliance on vehicles, which helps increase air quality and decrease the average temperature due to less asphalt parking spaces and concrete parking garages. Furthermore, encouraging bicycle and pedestrian traffic in these areas is a more sustainable option that also has a positive impact on public health.

Part II of this narrative discusses the problems with requiring a minimum amount of off-street parking spaces. Part III discusses how Carlisle's ordinance is outdated because of the amount of unused parking the ordinance inevitably requires. Part IV discusses ordinances from

other places and their provisions that help to solve social, economic, and environmental problems.

II. The Problem with Carlisle’s Minimum Off-Street Parking Spaces Requirements

Minimum off-street parking space requirements would appear to be a convenience for the community; however, the overabundance of parking spaces actually hinders businesses and residents alike. The requirement to provide a set number of parking can become a burden to business owners because it results in a surplus of unused spaces and a depreciation of property values.

Carlisle Borough Council has acknowledged these problems and the need for change. Carlisle’s Community Development Manager, Mike Skelly, describes the proposed changes to parking minimum requirements as “long overdue.”⁷ The Borough seeks to support sustainability and reduce climate change while ensuring that their citizens’ needs are met. This is demonstrated by the recent formation of a Climate Action Commission, which will focus on pinpointing sustainability-related problems and working towards short- and long-term solutions. Specific to off-street parking, Carlisle Borough is currently facing the following problems.

A. Concerns with Local Air Quality and Carlisle’s Carbon Footprint

Air pollution is typically associated with highly populated cities; however, “big metro areas” actually have “smaller carbon footprints” than smaller areas, such as Carlisle.⁸ In a 2008 study by the Brookings Institution, the “Harrisburg/Carlisle” area was ranked in the United States’ top five carbon emitters in tons per capita. Central Pennsylvania’s air pollution numbers

⁷ Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

⁸ Billitteri Thomas J., *Issues for Debate in Environmental Management: Selections from CQ Researcher, Chapter 4: Reducing Your Carbon Footprint* (2010) at 75.

continue to be concerning. According to EPA air pollution records, the Harrisburg-Carlisle region experienced 114 days of elevated air pollution in 2018.⁹ That number was second highest in Pennsylvania, with Lancaster coming in at 119 days.

Carlisle officials have expressed serious concern about this issue. In 2019, Carlisle Borough Council joined the Department of Environmental Protection's Local Climate Action Assistance Program. In July 2020, the Council passed a resolution for "the formation of a Climate Action Commission" that will be "charged with creating a Climate Action Plan (CAP) for the Borough of Carlisle within one year of formation."¹⁰ They've created the following goal: "to see the borough's greenhouse gas emissions cut 26% by 2025 and 80% by 2050 relative to 2005 levels."¹¹

As a crossroads of diesel-burning truck traffic, Carlisle's air quality is understandably a serious short-term health concern to residents and leaders. According to Neil Leary, Director of the Center for Sustainable Education at Dickinson College, the Cumberland Valley generally has poorer air quality than should be expected for a rural area like this because of a range of factors that include multiple highway systems and an abundance of trucking.¹² An impending addition to this problem: UPS recently announced a "major expansion," the construction of a large facility in Carlisle, and a "super hub" of delivery transit in Lower Swatara Township.¹³ This increase in

⁹ PennEnvironment Research & Policy Center, *Trouble in the Air*, Winter 2020, at 52.

¹⁰ Carlisle, PA Website, *Carlisle Borough Creates Climate Action Commission*, https://www.carlislepa.org/news_detail_T29_R148.php.

¹¹ Tammie Gitt, *Carlisle creates commission to form climate action plan*, The Sentinel (Sep. 3, 2020) https://cumberlink.com/news/local/communities/carlisle/carlisle-creates-commission-to-form-climate-action-plan/article_69ae3ec8-1579-5d26-a992-dd76c5245033.html.

¹² Vaughn Joshua, *Up in the Air: A review of air quality data in Cumberland County*, The Sentinel (Sept. 7, 2018), https://cumberlink.com/news/local/closer_look/up-in-the-air-a-review-of-air-quality-data-in-cumberland-county/article_fa63d7dc-dfa0-55f5-90a5-d755b533f0e7.html.

¹³ Marroni Steve, *Harrisburg-area 'super hub' part of major UPS expansion into Pa.* PennLive (Jan. 29, 2020) <https://www.pennlive.com/news/2020/01/harrisburg-super-hub-part-of-major-ups-expansion-into-pa.html>.

traffic will further increase Central Pennsylvania’s carbon footprint.¹⁴The external factors contributing to carbon emissions are clearly out of Carlisle’s control. Carlisle leaders are aware that they must focus on what they can change. Councilman Joel Hicks explained, “If we don’t do it now, we’re not going to have as many options later. We’re just going to be reactive.”¹⁵ The growth of “heat islands” is a problem that is within the Borough’s control. According to the EPA, “structures such as buildings, roads, and other infrastructure absorb and re-emit the sun’s heat more than natural landscapes” and result in “higher temperatures relative to the outlying areas.”¹⁶ Large asphalt parking lots are a prime example of heat islands because the black asphalt absorbs heat and typically there is minimal shading from trees. This issue is not exclusive to urban areas, as the EPA states, “[heat islands] can form under a variety of conditions . . . in small or large cities, in suburban areas.”¹⁷

B. Lack of Infrastructure for Electric Vehicles and Alternative Commuting

Currently, Carlisle Borough lacks an ordinance that (1) mandates electric charging stations; (2) a minimum number of electric vehicles parking spaces; and (3) a formal infrastructure for alternative transportation vehicles such as bicycles and scooters. This void is problematic for those who would like to, or already have, transitioned from a combustion-engine vehicle to a more sustainable transportation method. Without a way to charge their electric vehicles, individuals and businesses are inclined to continue driving a combustion-engine and increasing their carbon footprint.

¹⁴ *Id.*

¹⁵ Tammie Gitt, *Carlisle creates commission to form climate action plan*, The Sentinel (Sep. 3, 2020) https://cumberlink.com/news/local/communities/carlisle/carlisle-creates-commission-to-form-climate-action-plan/article_69ae3ec8-1579-5d26-a992-dd76c5245033.html.

¹⁶ *Heat Islands*, Environmental Protection Agency, <https://www.epa.gov/heatislands/learn-about-heat-islands> (last visited Oct. 3, 2020).

¹⁷ *Id.*

The demand for electric vehicle charging stations and parking spaces is rapidly increasing. According to a Bloomberg New Energy Finance report, electric vehicles will be cost-competitive with combustion-engine cars by 2022.¹⁸ The borough’s problem is the absence of charging stations and reserved parking spaces for these vehicles. Additionally, borough-owned vehicle fleets contribute to air pollution. The borough has already purchased one electric vehicle for the zoning officer’s use; however, there is not currently a plan to purchase additional electric vehicles, nor to install charging stations in public parking spaces.¹⁹

Additionally, the parking ordinance does not include required bicycle stations or covered parking structures for smaller vehicles such as scooters. In its “National Biking and Walking Study,” the Department of Transportation (DOT) recommends that municipalities take an integrated approach to this problem in order to encourage alternative forms of commuting, and travel in general. The DOT specifically recommends “infrastructural improvements such as bike lanes, secure parking, and shower facilities at work.” The National Association of City Transport Officials (NACTO) says they are seeing an “explosion in cycling” in many U.S. cities.²⁰ As the demand for bicycles skyrockets during the 2020 COVID-19 pandemic, the supply of secure bicycle parking spaces has fallen flat. Carlisle Borough can begin to solve this problem by placing secure bicycle parking spaces in public parking lots and streets.

¹⁸ Bullar Nathaniel, Electric Car Price Tag Shrinks Along with Battery Cost, Bloomberg Opinion, April 12, 2019.

¹⁹ Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

²⁰ Bryant Miranda, *Cycling 'explosion': coronavirus fuels surge in US bike ridership*, The Guardian (May 13, 2020) <https://www.theguardian.com/us-news/2020/may/13/coronavirus-cycling-bikes-american-boom>.

C. Rigid Parking Requirements' Economic Burden on Local Businesses

In addition to the public health and environmental problems posed by parking space minimum requirements, the Borough must also consider the related economic issues faced by local businesses and residents. The EPA opens its publication "Parking Spaces / Community Places: Finding the Balance through Smart Growth Solutions" with the following statement: "Downtown, storefronts may sit empty because new businesses that would like to move in can't meet high parking requirements – and too little parking makes good businesses less viable."²¹ The question is how to strike a balance between establishing realistic, sufficient parking requirements and overbroad, burdensome ordinances that hurt local businesses.

Carlisle's current – though outdated – ordinance assigns rigid minimum parking requirements based on zone-specific calculations. This is problematic for local businesses who do not utilize the minimum number of spaces yet must either pay for them or go through the lengthy process for an exception or variance. The EPA agrees: "Such inflexible parking requirements can force businesses to provide unneeded parking that wastes space and money. The space and money devoted to unnecessary parking could be used to accommodate other homes, businesses, shopping, or recreational opportunities in the community."²² Carlisle's small businesses may face economic problems if the ordinance is not amended to provide business owners with more agency.

²¹ EPA, *Parking Spaces / Community Places: Finding the Balance through Smart Growth Solutions*, (2006) at 1.

²² *Id.* at 2.

III. Carlisle’s Outdated Parking Ordinance Leaves Spaces Unused

Carlisle, Pennsylvania has been the County seat for Cumberland County since 1751.²³ Carlisle is classified as a borough but is run as a Home Rule municipality.²⁴ This provides Carlisle with “more control to craft ordinances and make decisions based on local needs.”²⁵ Cumberland County is the fastest growing county in Pennsylvania.²⁶ Cumberland County has increased in population by 7.63% from 2010 to 2019, with a .9% increase stemming from 2018 to 2019 alone.²⁷ Because of this increase in population, Carlisle is seeing changes in unusable infrastructure and business turnover, which has created parking situations which simply do not make sense anymore.²⁸ Carlisle is seeking parking remedies that can be implemented in conjunction with its comprehensive plan under its newly created Climate Action Commission to help alleviate these issues.²⁹

A. Effects of Carlisle’s Minimum Parking Space Requirement

Carlisle’s parking ordinance currently sets minimum parking requirements for dwellings and nonresidential uses.³⁰ For dwellings, Carlisle requires 1.5 parking spaces per one-bedroom unit plus an additional space for each additional bedroom in multifamily units.³¹ In 2007,

²³ *Cumberland County Facts*, Cumberland County Pennsylvania, <https://www.ccpa.net/59/County-Facts> (last visited Oct. 2, 2020).

²⁴ *Borough Government*, Carlisle Pennsylvania, <https://www.carlislepa.org/government/index.php> (last visited Oct. 3, 2020).

²⁵ *Id.*

²⁶ Teresa Boeckel, *Central Pennsylvania counties seeing significant population growth*, York Daily Record (Mar. 27, 2020) <https://www.ydr.com/story/news/2020/03/27/us-census-central-pa-counties-see-growth-lebanon-and-cumberland-fastest-growing/2915412001/>.

²⁷ *County Population Totals: 2010-2019*, United States Census Bureau (July 1, 2019) <https://www.census.gov/data/datasets/time-series/demo/popest/2010s-counties-total.html>.

²⁸ Zoom Interview with Joel Hicks, Carlisle Borough Council (Aug. 24, 2020).

²⁹ Tammie Gitt, *Carlisle creates commission to form climate action plan*, The Sentinel (Sep. 3, 2020) https://cumberlink.com/news/local/communities/carlisle/carlisle-creates-commission-to-form-climate-action-plan/article_69ae3ec8-1579-5d26-a992-dd76c5245033.html.

³⁰ CARLISLE, PA., ZONING CODE art. XXV, § 255-204-05 (2015).

³¹ *Id.*

Pennsylvania recommended 1.2 spaces for one- or two-bedroom apartments, 1.7 spaces for townhouses.³² Carlisle requires two off-street spaces for townhouse units.³³ Under Carlisle's ordinance, a two-bedroom apartment would require 2.5 parking spaces when the state recommends only 1.2 spaces for that same-sized unit.³⁴ Whitehall Borough, similar in size to Carlisle, is even less specific in their ordinance; merely requiring two spaces per residential dwelling unit.³⁵ However, Whitehall Borough's ordinance does specify that any required parking space calculations resulting in a fraction should be rounded up to the nearest whole number.³⁶ Carlisle's ordinance fails to provide guidance when a fraction of a parking space is the result.

By requiring a minimum, the ordinance implements a guess on the highest number of spaces needed. This creates excessive unused parking spaces. One study in Boston found that 30% of the surveyed available parking was unused.³⁷ For example, assume there is an apartment building with ten apartments, each having two bedrooms. Four of those apartments are rented by single occupants while the other six apartments are rented by families of four. Because those four apartments have two-bedrooms, there is a minimum requirement of six spaces plus an additional four spaces for each of the second bedrooms. This results in ten total parking spaces

³² *Pennsylvania Standards for Residential Site Development*, Pennsylvania Housing Research Center (April 2007) [http://www.dot.state.pa.us/Public/Bureaus/PlanningResearch/MRO/PA_Standards_for_Residential_Site_Design_\(2007\).pdf](http://www.dot.state.pa.us/Public/Bureaus/PlanningResearch/MRO/PA_Standards_for_Residential_Site_Design_(2007).pdf).

³³ CARLISLE, PA., ZONING CODE art. XXV, § 255-204-05 (2015).

³⁴ *Pennsylvania Standards for Residential Site Development*, Pennsylvania Housing Research Center (April 2007) [http://www.dot.state.pa.us/Public/Bureaus/PlanningResearch/MRO/PA_Standards_for_Residential_Site_Design_\(2007\).pdf](http://www.dot.state.pa.us/Public/Bureaus/PlanningResearch/MRO/PA_Standards_for_Residential_Site_Design_(2007).pdf).

³⁵ WHITEHALL BOROUGH, PA. ORDINANCE, art. XII, § 27-146(A)(18) (2002).

³⁶ WHITEHALL BOROUGH, PA. ORDINANCE, art. XII, § 27-146(B) (2002).

³⁷ Daniel Herriges, *We Require Too Much Parking. These Boston Planner Found Out Exactly How Much*. StrongTowns (Aug. 2, 2019) <https://www.strongtowns.org/journal/2019/8/2/we-require-too-much-parking-boston-planners-found-out-exactly-how-much>.

for the four single occupants. Multiply that result by the number of apartment buildings in Carlisle to recognize how many parking spaces are worthless just based on that one use.

The minimum parking requirement has already had a negative impact on development in Carlisle. One developer was involved in revitalizing a forty-five-acre brownfield.³⁸ Carlisle recognized the importance of that project because brownfields contain hazardous substances, pollutants, or contaminants but are able to be redeveloped or reused.³⁹ Redeveloping a brownfield creates jobs, utilizes current infrastructure, all while protecting the environment.⁴⁰ Rather than creating an amendment, Carlisle simply added a note regarding minimum parking for the Urban Mixed-Use Zone.⁴¹ This note, which is noted with an asterisk below the main section, altered the general minimum parking requirement for certain types of dwelling in this zone.⁴² Although the note cited the general parking ordinance under Article XXV, that article makes no mention of the note. This can cause future developers to overlook the changes.⁴³

Although the brownfield developer's plan worked out, Carlisle missed out on a development opportunity in a different zone.⁴⁴ Another developer wanted to take an underutilized building on South Street and turn it into an apartment complex.⁴⁵ Because of the location, the project would have to conform to the required minimum parking space provision

³⁸Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

³⁹ *Overview of EPA's Brownfield Program*, United States Environmental Protection Agency, <https://www.epa.gov/brownfields/overview-epas-brownfields-program> (last updated July 8, 2020).

⁴⁰ *Id.*

⁴¹ CARLISLE, PA., ZONING CODE art. XVII, § 255-123 (2019).

⁴² *Id.*

⁴³ *Id.*

⁴⁴Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

⁴⁵ *Id.*

under Article XXV.⁴⁶ Although Carlisle allows developers to seek variances from this requirement by going to the Zoning Hearing Board, this developer chose not to go through the lengthy variance process.⁴⁷ By requiring a minimum amount of parking spaces, the ordinance increases the cost to develop and revitalize. As this example shows, seeking a variance is not a route a developer wants to take because it can be lengthy and costly with no guaranteed positive outcome.

B. Preparing for Carlisle's Future

With the formation of Carlisle's Climate Action Commissions comes a shift towards sustainability. One focus-area Carlisle is eager to support is the usage of more electric vehicles (EVs). In order to incentivize citizens to procure and utilize more electric vehicles, priority parking spaces and access to charging stations needs to be increased.⁴⁸ Currently, Carlisle does not have any provisions regarding EV parking nor EV charging stations.

IV. Existing Ordinances Producing Positive Social, Environmental, and Economic Outcomes

Municipalities of all sizes have implemented changes to their parking ordinances that aim to reduce the negative effects of large off-street parking lots. The shift to *sustainable* development requires "integrated decision making," which involves the combination of social, environmental, and economic considerations.⁴⁹ Municipalities can address all three of these

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ *Pennsylvania Electric Vehicle Roadmap*, Pennsylvania Department of Environmental Protection (February 2019) <http://files.dep.state.pa.us/Energy/OfficeofPollutionPrevention/StateEnergyProgram/PAEVRoadmap.pdf>.

⁴⁹ John C. Dernbach and Federico Cheever, *Sustainable Development and Its Discontents*, *Transnational Environmental Law* at 253.

issues by reducing or eliminating the minimum number of required parking spaces. Fewer seas of asphalt mean lower average temperatures, more citizens using healthier, cleaner means of transportation, and less of a financial burden on small businesses and developers. The following municipalities have reduced or eliminated their minimum parking requirements, and have already seen the positive social, environmental, and economic affects.

A. Existing Ordinances

The recommended first steps in a municipality's journey to reduce minimum parking requirements is to cut current requirements in half, eliminate requirements for smaller buildings, and eliminate minimum parking requirements for downtown areas.⁵⁰ Pittsburgh, Harrisburg, and Minneapolis have all eliminated minimum parking requirements for their downtown areas. Harrisburg accomplished this task using one sentence. The provision under Harrisburg's Applicability section states "[t]he off-street parking requirements in this chapter do not apply to uses within the Downtown Center or Commercial Neighborhood Zoning Districts."⁵¹ This was a simple, yet effective approach.

Phoenixville is a town that parallels Carlisle in many ways. Phoenixville's population was 16,440 as of the 2010 census, while Carlisle's was 18,682 at the time.⁵² They are both historic boroughs settled in the early 1700s, and their downtown areas have been revitalized.⁵³ Both boroughs are also within close proximity to busy highways and medium to large size cities, which leads to the shared concern about sustainability. In 2014, Phoenixville amended their

⁵⁰ Craig Lewis, *Smaller Cities Lighten Up on Minimum Parking Requirements*, NAIOP Commercial Real Estate Development Association (Summer 2016) <https://www.naiop.org/Research-and-Publications/Magazine/2016/Summer-2016/Development-Ownership/Smaller-Cities-Lighten-Up-on-Minimum-Parking-Requirements>.

⁵¹ HARRISBURG, PA., PLANNING AND ZONING CODE, ch. 7-327, § 7-327.2 (2014).

⁵² U.S. Census Bureau, "American Fact Finder Results" <https://www.factfinder2.census.gov>.

⁵³ Stoller Gary, "This Town May Be Small, But Its Craft Beers Have Quite A Buzz." *Forbes*. (Jan 18, 2019).

parking ordinance to eliminate minimum off-street parking requirements in the “Town Center Zoning District,” which is essentially the town’s downtown area.⁵⁴ The amendment read as follows:

“Off-street parking shall be provided to meet the demand for the proposed land use. The applicant shall calculate this demand based on accepted standards, such as published in the Institute of Transportation Engineer's Parking Generation Reports. Mixed-use projects shall provide parking according to a shared parking analysis that projects parking needs based on the peak hour of parking demand.”⁵⁵

With this ordinance amendment, Phoenixville completely eliminated all parking requirements for their main street and the adjacent side streets near the downtown area.⁵⁶ Outside of that area, the amendment overhauled the previous complex zoning system. In the new comprehensive plan, “anyone who wants to put in parking with a new development must implement a parking demand study. Then the borough must approve the application.”⁵⁷

Pittsburgh and Minneapolis took different approaches to eliminating the minimum parking space requirement in their downtown areas. Pittsburgh added a provision titled “Off-Street Parking Exemption/Reduction Areas.”⁵⁸ The goal of this provision was to decrease minimum parking in certain areas, by certain uses, using a percent decrease.⁵⁹ By reducing or eliminating minimum parking, Pittsburgh wanted to increase pedestrian safety while lessening

⁵⁴ BOROUGH OF PHOENIXVILLE, PA., MUNICIPAL Code ch. 27, part 4 § 27-405(1) (2014).

⁵⁵ *Id.*

⁵⁶ Quednau Rachel, Strong Towns, “How to Get Rid of Parking Minimums: Phoenixville, PA” (November 23, 2015).

⁵⁷ *Id.*

⁵⁸ PITTSBURGH, PA., ZONING CODE, ch. 914, art. VI, § 914.04 (2018).

⁵⁹ *Id.*

people’s reliance on vehicles.⁶⁰ This goal can be accomplished because developers will no longer need to cut into the curb to provide a required parking space.⁶¹ This will increase pedestrian safety as well because it limits pedestrian and car crossings. Additionally, parking spaces have low tax revenue value.⁶² Unused parking spaces mean less funding available for fire protection, parks, police, schools, and even streets.⁶³

Minneapolis added a provision titled “Specific Off-Street Parking Requirements,” which describes how downtown parking is regulated.⁶⁴ Minneapolis’s table for Downtown Districts has columns for use, minimum parking requirement, and maximum parking allowed.⁶⁵ Minneapolis has designated sections dividing the uses for residential, institutional and public, and commercial uses.⁶⁶ The minimum parking requirement column for all of Minneapolis’s uses simply says “None.”⁶⁷ By reducing the amount of required parking, Minneapolis hoped to “reduce the cost of housing by eliminating the need for developers to build expensive underground parking garages.”⁶⁸

Pittsburgh also utilizes tables to display their requirements. Pittsburgh’s table has columns for area, use, and percent decrease.⁶⁹ Pittsburgh has decreased parking minimums by

⁶⁰ Mark Belko, *No chair needed: City board backs end to off-street parking requirement*, Pittsburgh Post-Gazette (July 2, 2020) <https://www.post-gazette.com/business/development/2020/07/02/Pittsburgh-Planning-Commission-off-street-parking-curb-cuts-garages-development/stories/202007020087>.

⁶¹ *Id.*

⁶² Rachel Quednau, *3 Major Problems with Parking Minimums*, StrongTowns (July 3, 2018) <https://www.strongtowns.org/journal/2018/7/2/3-major-problems-with-parking-minimums>.

⁶³ *Id.*

⁶⁴ MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.170(c) (2018).

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ Eric Roper, *Mpls. Relaxes parking requirements to reduce housing costs*, Star Tribune (July 10, 2015) <https://www.startribune.com/mpls-relaxes-parking-requirements-to-reduce-housing-costs/313286521/>.

⁶⁹ PITTSBURGH, PA., ZONING CODE, ch. 914, art. VI, § 914.04 (2018).

100% for any use in their Downtown area, Lower Hill Planned Development, and Uptown Public Realm District.⁷⁰ By having a 100% reduction in a planned development, Pittsburgh shows that it is thinking towards the future and recognizing that minimum parking requirements are not necessary in certain parts of the city, though having this provision as a percent reduction chart is not the easiest provision to comprehend. Pittsburgh's downtown area is a bustling hub for businesses throughout the day but has a much lower parking demand during nighttime hours.

Lastly, Hartford, Connecticut enacted the most drastic version of parking elimination: the city no longer mandates *any* parking.⁷¹ The decision is completely left up to developers, homeowners, and business owners. Special use properties, such as stadiums, are subject to case-by-case reviews.⁷² This allows for an incredible amount of flexibility; however, the ordinance was also revised to add maximums. The Zoning Board unanimously approved this change, which Board Chair Sara Bronin expressed was met with nearly "universal" citywide approval.⁷³ This municipality's success was another example of why we included maximums in our revision.

B. Economic Benefits

Harrisburg's requirement of just one parking space per unit increases development costs by approximately 12.5%.⁷⁴ Because of the rise in cost, the profits per acre decrease for the developer.⁷⁵ When profits decrease, there is less incentive for a developer to construct affordable

⁷⁰ *Id.*

⁷¹ Sara Bronin, "Rethinking Parking Minimums," *American Planning Association*, <https://www.newingtonct.gov/AgendaCenter/ViewFile/Item/2246?fileID=3987>.

⁷² *Id.*

⁷³ Angie Schmitt, "Hartford Eliminates Parking Minimums Citywide," *StreetsBlogUSA*, Dec. 13, 2017). <https://usa.streetsblog.org/2017/12/13/hartford-eliminates-parking-minimums-citywide/>.

⁷⁴ Todd Litman, *Parking Requirement Impact on Housing Affordability*, Victoria Transport Policy Institute (June 5, 2020) <https://vtpi.org/park-hou.pdf>.

⁷⁵ *Id.*

housing.⁷⁶ Hartford also experienced a decrease in development costs, along with an increase in tax revenue.⁷⁷ Prior to the change, an American Planning Association study found, “parking uses cost the city \$50 million annually.”⁷⁸ This elimination of parking requirements allowed developers more room for building, and business owners more space for expansion.⁷⁹

Phoenixville’s ordinance shifted to focus on providing business and homeowners more agency in determining the number of parking spaces that is suitable for their businesses. Previously, the minimum requirement left them with few options. Although the new proposal process requires more effort on behalf of the applicant, the ordinance was well-received with little pushback.⁸⁰ Ray Ott, Phoenixville’s City Planning Consultant, summarizes the main aspect of this change: “You can make a good case by showing the amount of space that is taken up by parking [through photos].” The essence of the original ordinance was similar to that of Carlisle’s: rigidly based on set minimum parking space requirements based on the type of business or residence. The update emphasized allowing for more flexibility and providing business owners with the agency to request an increase or decrease in parking capacity. Overall, the parking ordinance changes marked a shift away from the mentality that large parking lots are a necessity.

Minneapolis exempted smaller non-residential use buildings of less than one thousand square feet from the minimum parking requirements.⁸¹ Exempting these small buildings helps to support local small businesses because the small business owners can now take their profits and

⁷⁶ *Id.*

⁷⁷ “Rethinking Parking Minimums” at 9.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.170(c) (2018).

spend it on supplies, needed upgrades, and renovations instead of pumping their money into asphalt for parking spaces.⁸²

C. Social Benefits

Reducing the amount of off-street parking has improved the quality of life, overall aesthetic, and social development of municipalities. For instance, Sandpoint, Idaho completely eliminated downtown parking requirements in 2009.⁸³ This resulted in more developers investing in projects in the downtown area.⁸⁴ Specifically, a local taqueria as well as the local winery were both able to expand and transform.⁸⁵ A local tech startup was able to renovate an old building and upgrade to a more modern campus, which now employs over 100 full-time employees.⁸⁶ While these are economic benefits as well, they also mark the growth and vibrance of downtown areas by providing residents and tourists with more to do.

The changes to Phoenixville's ordinance also brought social benefits by allowing residents to obtain passes for individual and guest parking spaces. The ordinance allowed the borough to install bicycle racks in public parking areas. This encourages healthier, green commuting options and provides a secure place to store bicycles free of charge.⁸⁷ With parking minimums removed, Phoenixville is able to preserve historic buildings in a historic district, as well as keep the streets productive and active. Phoenixville's city planner best summarized the social benefits of removing parking minimums. "Integrity and quality of life in the town draws people, not parking," said Ott.⁸⁸

⁸² Rachel Quednau, *3 Major Problems with Parking Minimums*, StrongTowns (July 3, 2018) <https://www.strongtowns.org/journal/2018/7/2/3-major-problems-with-parking-minimums>.

⁸³ SANDPOINT, OHIO, CODE OF ORDINANCES ch. 5, § 9-5-1(F) (2009).

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ BOROUGH OF PHOENIXVILLE, PA., MUNICIPAL Code ch. 15, part 4 § 15-413 (2008).

⁸⁸ *Id.*

D. Environmental Benefits

The push for municipalities to reduce the amount of off-street parking is relatively recent. As a result, it is difficult to point to concrete examples of environmental improvements that directly resulted from the changes. However, as discussed at the beginning of this narrative, the environmental problems caused by an overabundance of asphalt parking lots are evident in the poor air quality calculations. Additionally, Hartford – the first city to eliminate minimum requirements – has reported indicators of positive environmental changes.⁸⁹ For instance, there are fewer cars on the roads, more bikes, and more green spaces.⁹⁰ By 2016, a survey found, “a third of households didn’t own a single vehicle.”⁹¹ The city has become more walkable, and residents are less reliant on carbon-emitting vehicles.⁹²

E. Charging into the Future

Pennsylvania is finding ways to increase the use of electric vehicles across the state. The Pennsylvania Department of Environmental Protection has state incentives through rebates, grants, and reimbursements towards both governmental and non-governmental bodies for increasing the use of electric vehicles as well as installing charging stations.⁹³ Pennsylvania’s electric vehicle sales placed the state in twenty-fourth position nationwide.⁹⁴ The goals for cities and towns across the state should be to implement provisions regarding priority parking spaces for EV vehicles as well as urging the installation of electric vehicle supply equipment (EVSE),

⁸⁹ Tyler Quinn-smith, “Parking reform for 21st century communities,” *Smart Growth America*, Mar. 6, 2020. <https://smartgrowthamerica.org/webinar-recap-parking-reform-for-21st-century-communities/>.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Pennsylvania Laws and Incentives*, Alternative Fuels Data Center, U.S. Department of Energy, <https://afdc.energy.gov/laws/all?state=PA> (last visited on Oct. 3, 2020).

⁹⁴ *Pennsylvania Electric Vehicle Roadmap*, Pennsylvania Department of Environmental Protection (February 2019) <http://files.dep.state.pa.us/Energy/OfficeofPollutionPrevention/StateEnergyProgram/PAEVRoadmap.pdf>.

such as charging stations. “EV-friendly zoning ordinances can encourage the development of infrastructure necessary to address market barriers to widespread EV deployment.”⁹⁵

Although Pennsylvania is pushing cities towards adopting EV provisions in their ordinances, other cities across the nation have already begun to do so. In order to better serve the public, EV charging stations should be included as permitted land uses in certain areas.⁹⁶ Having make-ready standards in the ordinance saves time and money for future installation of chargers because the infrastructure is already present.⁹⁷ For example, Montgomery County, Maryland’s ordinance states “[t]he minimum number of electric vehicle charging stations required is 1 electric vehicle charging station per 50 parking spaces.”⁹⁸ Cities are also adding EV required parking spaces to their minimum parking requirements.⁹⁹ Duluth, Minnesota requires “[a] minimum of 2% of required automobile parking spaces are signed and reserved for hybrid/electric/low energy vehicles in preferred locations near the primary building entrance.”¹⁰⁰

VI. Recommendation

The following is a summary of our key ordinance revisions: (1) eliminating the minimum parking requirement for downtown and certain residential zones, (2) eventually adding a parking space maximum for municipal and commercial parking lots, (3) adding required reserved electric

⁹⁵ Brian Ross and Clairece Cook, *Reducing Transportation Emissions Through Better Zoning* (June 19, 2019) <https://www.betterenergy.org/blog/reducing-transportation-emissions-through-better-zoning/>.

⁹⁶ Claire Cooke and Brian Ross, *Summary of Best Practices in Electric Vehicle Ordinances* (June 2019) https://www.betterenergy.org/wp-content/uploads/2019/06/GPI_EV_Ordinance_Summary_web.pdf.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ DULUTH, MINN. LEG. CODE ch. 50, art. 4 Table 50-29-1: Sustainability Point System (2019).

vehicle spaces, and (4) adding electric vehicle parking spaces based on the percentage of total spaces provided.

A. Minimum and Maximum Recommendations

Our recommended ordinance revisions are less drastic than other cities, such as Harrisburg and Phoenixville, which immediately and completely eliminated minimum parking requirements. After conversations with Carlisle Borough elected officials and city planners, we decided to take a gradual approach, so that businesses and developers can have time to adjust accordingly. As such, we recommend that maximum parking limits be enacted after two years for municipal use and five years later for all other uses. The maximum amounts will be 120% of the minimum amounts.¹⁰¹ This range will guide developers and give business owners more flexibility and autonomy in determining how many spaces would meet their needs.

B. Electric Vehicle Recommendations

On the topic of alternative transportation, we wanted to focus on accommodating and encouraging the use of electric vehicles while not overburdening business owners.¹⁰² We recommend that non-residential properties such as strip malls be required to reserve 3% of spaces for electric vehicles, and just 1% of the spaces must have a charging station. These numbers were recommended by the Great Plains Institution's Best Practices in Electric Vehicle Ordinances, which summarized dozens of municipalities' parking ordinances.¹⁰³ The majority of

¹⁰¹ *New Town Mixed Use District*, Montgomery County Planning Commission (2010), <https://www.montcopa.org/DocumentCenter/View/4101/NTMMOrdFinal?bidId=>.

¹⁰² The topic of on-street electric vehicle parking, as well as bicycle parking, is being addressed by Larissa Wright and Nicholas Dukach, fellow Widener students. Our topic focuses on off-street electric vehicle parking.

¹⁰³ *Summary of Best Practices in Electric Vehicle Ordinances* (June 2019).

these municipalities required 3-10% of total spaces to be reserved for electric vehicles, and 1-5% to include charging stations.¹⁰⁴ Again, we recommend starting off with a smaller percentage so that business owners and developers are neither caught off guard nor overburdened.

C. Funding

Fortunately, these ordinance revisions will not require much work from the municipality. The issue of funding mostly falls on business owners and developers, which is why the numbers start off as fairly conservative. Charging stations in municipal lots, such as the downtown parking garage, will require Borough funding. This may be paid for through permit applications fees. Additionally, although not addressed in this ordinance revision, conversations with Carlisle Borough leaders suggested the potential for teaming up with businesses to provide these stations.¹⁰⁵ This goes beyond the scope of our ordinance, so we recommend that the Climate Action Commission should look into supplemental methods of funding for the stations.

The Borough itself can benefit from electric vehicles and charging stations by investing in fleets. For example, Houston invested in electric Nissan Leafs, which have zero tailpipe emissions, and “it is estimated that *each vehicle* will save \$7-\$8k in fuel and maintenance costs over a three-year period.”¹⁰⁶ Carlisle could use charging stations for city employees’ electric vehicles, which are currently being considered.¹⁰⁷

¹⁰⁴ *Id.*

¹⁰⁵ Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

¹⁰⁶ *Electric Vehicles*, HOUSTON FLEET MANAGEMENT DEPT. (2020), <https://www.houstontx.gov/fleet/ev/>.

¹⁰⁷ Zoom Interview with Joel Hicks, Mike Skelly, Owen Snyder, and Susan Armstrong, Carlisle Borough Council (Oct. 1, 2020).

VI. Conclusion

As global warming worsens and air pollution reaches unhealthy levels, it is clear that a shift towards sustainability is imperative. From large cities to suburban boroughs such as Carlisle, community leaders are recognizing the need for public policy and laws that reflect the needs of their environment. Rather than waiting for the federal government to take action, community leaders are taking the initiative to make progress. Carlisle Borough's Climate Action Commission is one example of this movement at the local level. Removing the minimum parking space requirement would have far-reaching social, public health, economic, and environmental benefits. By rethinking the outdated parking ordinance, Carlisle Borough can reduce the number of heat islands, encourage the usage of electric vehicles, accommodate bicycle and pedestrian traffic, alleviate the financial burden on small businesses, and ultimately make their community more sustainable.

{Underlining signifies additions to Carlisle’s current ordinance while brackets signify deletions from Carlisle’s current ordinance.}

ORDINANCE NO.

AN ORDINANCE OF THE BOROUGH OF CARLISLE AMENDING ARTICLE XXV OF THE CODE OF THE BOROUGH OF CARLISLE TO PROVIDE FOR THE FURTHER REDUCTION OF MINIMUM PARKING, EVENTUAL MAXIMUM PARKING LIMIT, AND TO REQUIRE ELECTRIC VEHICLE PARKING.

IT IS HEREBY ENACTED AND ORDAINED by Carlisle Borough, Cumberland County, Pennsylvania, as follows:¹⁰⁸

Article XXV

Section 1. Article XXV of the ordinance is amended by adding subarticle to read:¹⁰⁹

SUBARTICLE A

PRELIMINARY PROVISIONS

Section 2501. Short title.

This article shall be known and may be cited as the Carlisle Borough Off-Street Parking and Loading Ordinance.

Section 2502. Declaration of purpose.

The governing body of Carlisle Borough finds and declares as follows:

¹⁰⁸ Direct language from a current Carlisle proposed ordinance located here <https://cms8.revize.com/revize/carlislepa/Government/ordinances/proposed%20ordinances/Rental%20Housing%20Ordinance%2003092020.pdf>.

¹⁰⁹ This format is taken from Legislative Reference Bureau’s (LRB) suggestions.

(1) It is in the best interest of the Borough to decrease the number of required parking spaces and mitigate the detrimental impact of combustion engine vehicles on the environment and public health.

(2) In order to accomplish this objective, the governing body of the Borough to enact an ordinance for all of the following purposes:

(i) Encouraging the use of electric vehicles, which are less detrimental to the environment and public health than combustion engine vehicles.

(ii) Allowing land developers more flexibility to create projects that result in more affordable housing.

(iii) Promoting a more efficient use of land and reduce the amount of underutilized parking spaces.

(iv) Easing the burden on business owners to provide an overabundance of parking spaces.

(v) Improving the attractiveness of the borough by encouraging green spaces rather than large asphalt areas.

(vi) Limiting the number of parking spaces required for each parcel of land.

Section 2503. Legal authority.

This article is enacted and ordained:

(1) under the grant of powers by the General Assembly of the Commonwealth of Pennsylvania under the act of July 31, 1968 (P.L.805, No.247), known as the Pennsylvania Municipalities Planning Code;

(2) under the grant of powers by the General Assembly of the Commonwealth of Pennsylvania under 53 Pa. C.S. § 2964¹¹⁰(relating to general powers of municipalities); and

(3) as authorized by Carlisle Borough Home Rule Charter § 602.¹¹¹

Section 2504. Construction.

This article shall be construed as being consistent with other laws of this Commonwealth, whenever possible.

Section 2. Section 255-12 of the ordinance is amended by adding definitions to read:

§ 255-12. Definitions.

The following words and phrases when used in this article shall have the meanings given to them in section unless the context clearly indicates otherwise:

ELECTRIC VEHICLE¹¹²

Any vehicle that is powered completely by electrical energy from the grid or from an off-board source that is stored in the vehicle's battery. The term does not include plug-in hybrid electric vehicles.¹¹³

ELECTRIC VEHICLE CHARGING STATION

A public or private parking space that includes battery charging station equipment to transfer electric energy to an electric vehicle battery.¹¹⁴

¹¹⁰ 53 Pa. C.S. § 2964.

¹¹¹ CARLISLE, PA., HOME RULE CHARTER § 602 (2016).

¹¹² Formatting, including definitions in all caps, kept from CARLISLE, PA., ZONING CODE art. II, § 255-12 (2015).

¹¹³ WARREN, MICH., CODE OF ORDINANCES app. A, art. E, div. 1 § 4E.01 (2016).

¹¹⁴ *Id.*

Section 3. Article XXV of the ordinance is amended by adding a subarticle heading to read:

SUBARTICLE B

MINIMUM PARKING AND ELECTIC VEHICLE PARKING

Section 4. Section 255-201 of the ordinance is amended to read:

§ 255-201. General requirements; size.

Off-street parking space or spaces with proper and safe access from a street shall be provided on each lot, either within a structure or in the open, to serve the uses within the district adequately.

The following shall apply:

A¹¹⁵. [Sizes of spaces.] Parking spaces shall have a stall of at least nine by 18 feet in size.

B. [Surface.] Parking spaces shall have a surface approved by the Borough Engineer and shall have a safe and convenient access in all seasons.

C. [Screening and landscaping.] Off-street parking lots shall be provided with screening and landscaping as required by this chapter.

D. When the calculation of required parking spaces results in a fractional number, a fraction of less than one-half shall be rounded down to the nearest whole number and a fraction of one-half or more shall be rounded up to the next highest whole number.¹¹⁶

E. Any expansion of an existing use shall comply with the off-street parking requirements of this article.¹¹⁷

¹¹⁵ Comments from LRB regarding changing A. to (1) throughout this section were not followed because Carlisle follows this format in their ordinance.

¹¹⁶ PITTSBURGH, PA., ZONING CODE, ch. 914, art. VI, § 914.03.A (2018).

¹¹⁷ HARRISBURG, PA., PLANNING AND ZONING CODE, ch. 7-327, § 7-327.4 (2014).

F. Any change of use which results in an increased number of required parking spaces shall comply with the off-street parking requirements of this article.¹¹⁸

G. The parking standards of this article shall apply to any new building constructed and to any new use established, on or after the effective date of this paragraph in accordance with the standards of this article.¹¹⁹ Excess parking may be removed at the property owner's expense.

H. The reduction in required parking spaces under this article shall not apply to nonresidential and residential units currently in existence on November 1, 2020.

I. The requirement of electric vehicle parking spaces under this article shall not apply to nonresidential and residential units currently in existence on November 1, 2020.

Section 5. Section 255-202 of the ordinance is amended and the section is amended by adding a subsection to read:

§ 255-202. Location of Parking for dwellings.

* * *

C. Driveway area, including driveways within the required building setbacks, may be used to compute the required spaces only when individual driveways are provided for each

¹¹⁸ HARRISBURG, PA., PLANNING AND ZONING CODE, ch. 7-327, § 7-327.4.B (2014).

¹¹⁹ PITTSBURGH, PA., ZONING CODE, ch. 914, art. VI, § 914.01.A (2018).

dwelling; garages or carports shall be required in any zoning district unless specified by the individual zoning district.

* * *

E¹²⁰. To incentivize the use of electric vehicles for dwellings, electric vehicle parking spaces shall be located in desirable and convenient parking locations.¹²¹

(1) Multifamily, single-family attached and townhouse dwellings may not place more than two electric vehicle parking spaces next to each other, as required below under section 255-204.

(2) (Reserved).

Section 6. Section 255-203 of the act is amended by adding subsections to read:

§ 255-203 Location of parking for nonresidential uses.

A. One or more parking lots may be designed to service a multiple number of commercial uses so long as none of the requirements of this chapter are violated, and provided that all such parking is on the same lot or within [3]500 feet of walking distance from the subject use.¹²² [The aggregate of all available spaces shall be at least equal to the sum required to serve all proposed uses.]¹²³

B. Parking and loading areas for refrigerated trucks or tractor-trailer trucks shall not encroach on required yards.

¹²⁰ Comments from LRB regarding changing E. to (e) were not followed because Carlisle follows this format in their ordinance.

¹²¹ ST. LOUIS PARK, MINN., ZONING ORDINANCE, ch. 26, art. V, § 36-361(e)(6)(b)(2) (2020). Left open to interpretation until Carlisle's Climate Action Commission gathers more Carlisle-specific data to add a distance or more detailed explanation as to where the electric vehicles spaces shall be located.

¹²² MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.170(e)(2) (2018).

¹²³ Zoom Interview with Joel Hicks and Karla Farrell, Carlisle Borough Council and Carlisle Climate Action Commission (Nov. 24, 2020).

C¹²⁴. To incentivize the use of electric vehicles for nonresidential uses, electric vehicle parking spaces shall be located in desirable and convenient parking locations.¹²⁵

D. All required electric vehicle charging stations shall be permitted to be located in all zoning districts.¹²⁶

E. Electric vehicle charging stations shall be permitted within a borough right-of-way.¹²⁷

Section 7. Sections 255-204 and 255-205 of the ordinance are amended to read:

§ 255-204 Number of required spaces for residential dwellings.

A¹²⁸. Applicability. [Unless the contrary is specified by the applicable zoning district, 1.5 off-street parking spaces per one-bedroom multifamily unit and one additional off-street parking space for each additional multifamily unit bedroom and two off-street spaces for single-family and townhouse units, except as hereinafter provided.] The following shall apply:

[Amended 5-14-2015 by Ord. No. 2222, approved 5-14-2015]

(1) Residential dwellings shall comply with the required amount of minimum parking spaces as calculated below.

(2) Except for the electric vehicle parking requirements under this article, the off-street minimum parking requirements under this article do not apply to the R-3 and R-4 zones to help incentivize new developments.¹²⁹

¹²⁴ Comments from LRB regarding changing C. to (c) throughout this section were not followed because Carlisle follows this format in their ordinance.

¹²⁵ ST. LOUIS PARK, MINN., ZONING ORDINANCE, ch. 26, art. V, § 36-361(e)(6)(b)(2) (2020).

¹²⁶ Cooke, Claire & Ross, Brian, *Summary of Best Practices in Electric Vehicle Ordinances*, Great Plains Institute, June 2019 at 6.

¹²⁷ *Summary of Best Practices in Electric Vehicle Ordinances* at 6.

¹²⁸ Comments from LRB regarding changing A. to (a) throughout this section were not followed because Carlisle follows this format in their ordinance.

¹²⁹ HARRISBURG, PA., PLANNING AND ZONING CODE, ch. 7-327, § 7-327.2 (2014).

[B. For nonprofit or publicly sponsored housing providing one bedroom or less and designed for occupancy by the handicapped or persons over the age of 60, the Zoning Hearing Board may, as a special exception, reduce the required parking as low as a minimum of one off-street space per three dwelling units if the Zoning Hearing Board determines that such parking would be sufficient based upon evidence presented by the applicant.]¹³⁰

B. Minimum off-street parking requirements for dwellings.

(1) One off-street parking space shall be permitted for each one-bedroom unit in a multifamily dwelling. An additional .5 off-street parking space shall be permitted for each additional bedroom.

(2) One off-street parking space shall be permitted for each single-family or townhouse dwelling.

C. Electric vehicle parking requirements for dwellings.

(1) A multifamily dwelling shall reserve at least 3% of the total available parking spaces for electric vehicles. For parking lots with ten or more parking spaces, a minimum of at least one parking space shall be reserved for electric vehicle parking when the 3% calculation does not require at least one parking space.

(2) A multifamily dwelling shall provide at least 1% of the total available parking spaces with an electric vehicle charging station.

¹³⁰ Zoom Interview with Joel Hicks and Karla Farrell, Carlisle Borough Council and Carlisle Climate Action Commission (Nov. 24, 2020).

§ 255-205 Number of required parking spaces for nonresidential uses.

A. Parking space requirement. Unless the applicable zoning districts state the contrary, the following parking space requirements shall be met:

Use ¹³¹	Minimum Number of Spaces ¹³²
Hotel, motel, boardinghouse or bed-and-breakfast use	1 space for each <u>2</u> rental units
Restaurant or similar establishment	1 space for every [3] <u>6</u> seats (minimum of [20] <u>10</u> for a fast-food restaurant)
Places of assembly (theater, place of worship, funeral home or membership club)	1 space for every [3] <u>6</u> fixed seats, or where the capacity is not determined by the number of fixed seats, 1 space for each [60] <u>120</u> square feet of floor area devoted to patron use
Schools, primary or secondary	1 space per [15] <u>30</u> students in elementary schools; 1 space per [10] <u>20</u> students in other schools or 1 space for each [60] <u>120</u> square feet of

¹³¹ Section C. in Carlisle’s ordinance does not have chart lines; therefore, section C. was changed to show a chart with lines here for clarity.

¹³² Current ordinance was reduced by 50% as discussed during Zoom Interview with Joel Hicks and Karla Farrell, Carlisle Borough Council and Carlisle Climate Action Commission (Nov. 24, 2020).

	auditorium space, whichever is greater
Trade school	1 space per 2 students attending class at peak time
Retail store	1 space for each [300] <u>600</u> square feet of floor area used for sale or display of merchandise
Professional offices, except medical and dental offices and clinics, banks and similar establishments	1 space for each [250] <u>500</u> square feet of floor space where customers or clients are permitted
Medical and dental offices and clinics	[6] <u>3</u> spaces per doctor or dentist
Hospitals	1 space per [2] <u>4</u> beds
Nursing homes	1 space per [2] <u>4</u> beds
Personal service establishments	1 space for each [100] <u>200</u> square feet of customer service area

Wholesale or industrial establishments	1 space for each [7,500] <u>15,000</u> square feet of floor area
Auto service station or auto repair garage	[6] <u>3</u> spaces per service bay; in no case shall there be less than [5] <u>2.5</u> spaces
Shopping center	1 space for each [200] <u>400</u> square feet of total floor area
Colleges and other similar institutions of higher learning	1 space for each [4] <u>8</u> students; 1 space for each [2] <u>4</u> employees; and, in addition, a number of spaces equivalent to 10% of the total employee spaces shall be provided to accommodate visitors
Cemetery	1 space for each [40] <u>80</u> grave sites, situated throughout the lot
Commercial convenience store	1 space for each <u>2</u> pump heads, but no less than [5] 2.5 spaces, plus 1 space for each [2] <u>400</u> square feet of area used for the display and sale of merchandise, and 1 space for each [3]

	<u>6</u> seats provided (minimum [10] <u>5</u> for each accessory fast-food restaurant)
Neighborhood convenience store	1 space for each [5] <u>1000</u> square feet of area used for the display and sale of merchandise

- (1) The maximum required parking space limit shall be 120% of the minimum required parking space total.¹³³
- (2) (Reserved).

B. Applicability. The following shall apply:

- (1) Buildings for nonresidential uses shall comply with the required amount of minimum parking spaces as calculated above. Buildings for nonresidential uses shall not have parking spaces above the maximum parking space limit.
- (2) Except for the electric vehicle parking requirements, the off-street minimum parking requirements under this article shall not apply to uses within the UM, C-1, and C-2 zones to help incentivize new developments.¹³⁴
- (3) Except for the electric vehicle parking requirements, the off-street minimum parking requirements under this article shall not apply to nonresidential uses utilizing less than 1,000 square feet of total floor area to incentivize small businesses to build in Carlisle.¹³⁵

¹³³ *New Town Mixed Use District*, Montgomery County Planning Commission (2010), <https://www.montcopa.org/DocumentCenter/View/4101/NTMMOrdFinal?bidId=>

¹³⁴ HARRISBURG, PA., PLANNING AND ZONING CODE, ch. 7-327, § 7-327.2 (2014).

¹³⁵ MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.170 (2009).

C. Parking Requirements. The following shall apply:

- (1) Floor area for off-street parking purposes shall be calculated by taking the sum of the gross horizontal areas of the floors of the building. The horizontal areas shall include, but are not limited to, areas devoted to such use, including accessory storage areas located within selling or working spaces such as counters, racks, or closets, and any basement floor area devoted to retailing activities, the production of processing of goods or offices. Floor area calculations for off-street parking purposes shall not include dwellings or floor area devoted to off-street parking for aisles, ramps or maneuvering space.¹³⁶
- (2) The required parking spaces are based on the capacity of individuals; the off-street parking requirements shall be based on the maximum number of individuals that can utilize the goods or services at any one time year-round. The maximum number shall be determined by the floor space per individual as required under the applicable building codes.
- (3) If the required parking spaces are based on the number of employees, the requirement shall be based on the maximum number of employees on the premises at any one time.¹³⁷
- (4) The Planning Commission¹³⁸ shall establish the minimum and maximum parking required for any use not listed in this article. The Planning Commission may

¹³⁶ MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.130 (2009). (Carlisle simply defines floor area, whereas Minneapolis uses gross floor area.)

¹³⁷ MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.150 (2018). (quoted directly.)

¹³⁸ Zoom Interview with Joel Hicks and Karla Farrell, Carlisle Borough Council and Carlisle Climate Action Commission (Nov. 24, 2020). Karla Farrell will consult with Carlisle's Climate Action Commission to decide whether the Planning Commission or Zoning Hearing Board would be best to make this decision.

consider, but may not be limited to, the following in establishing parking requirements for an unlisted use under this article:

- (a) Documentation regarding the actual parking and loading demand for the proposed use. Documentation shall include available planning and technical studies related to the proposed use.
- (b) (Reserved).

D. Electric Vehicle Parking Requirements for Non-Residential Use.

- (1) A nonresidential use building shall reserve no less than 3% of total available parking spaces for electric vehicles. For parking lots with ten or more parking spaces, a minimum of at least one parking space shall be reserved for electric vehicle parking when the 3% calculation does not require at least one parking space.
- (2) A nonresidential use building shall provide no less than 1% of total parking spaces with an electric vehicle charging station.

Section 8. Section 255-207 of the ordinance is amended by adding a subsection to read:

§ 255-207 Completion deadline for parking areas.

- A.** All off-street parking areas required for a use, or portion thereof, shall be in place at the time of completion of such use, or portion thereof, except as allowed under § 255-208.
- B.** Applicability: Revisions required within this article shall apply upon the actual, physical completion of a new parking area.

Section 9. Section 255-208(a) and (b)(2) and 255-209(a), (b) introductory paragraph and (1) and (c)(1) and (3) of the ordinance are amended to read:

§ 255-208 Conditional reduction of parking requirements.

A. Intent. The intent of this section is to recognize the following:

- (1) The importance of providing adequate, well-designed off-street parking areas.
- (2) The need to limit the amount of paved parking area to preserve open space and limit stormwater runoff.
- (3) Unique circumstances associated with a land use may justify a reduction in the parking requirements of this article.
- (4) The need to reduce the borough's greenhouse gas emissions by discouraging the use of gas and diesel-burning motor vehicles while incentivizing the use of electric vehicles.

B. The Zoning Hearing Board may permit a reduction, through a special exception, of the number of parking spaces to be initially developed as required by this article, provided that each of the following conditions are satisfied:

- (1) The applicant shall demonstrate to the Board, using existing and projected employment, customer, resident or other relevant data, that a reduction in the off-street parking spaces to be initially developed as required by this article is warranted.

§ 255-209 Joint Parking Lots.

- A.** Two or more uses may provide for required parking in a common parking lot, provided that the total number of spaces in such lot shall not be less than the sum of the minimum spaces required for each use individually, shall not be more than the sum of the maximum spaces permitted for each use individually, except as provided below, and provided that such parking lot is within [3]500 feet walking distance of all of the principal uses served by such lot.¹³⁹
- B.** The applicant may seek to prove that the parking requirement should be reduced below the required minimum or increased above the maximum limit under the provisions of § **255-208** because the uses would have their peak parking at different times of the day. An applicant choosing to propose a development utilizing shared parking shall submit a parking demand summary sheet showing the process for calculating the reduction, as outlined in this section.

[Amended 5-14-2015 by Ord. No. 2222, approved 5-14-2015]

- (1)** The minimum and maximum number of parking spaces that are to be provided and maintained for each use shall be determined based on standard methods for determining minimum and maximum parking supply at a particular development.

* * *

- C.** The applicant for reduced parking under this section shall prove to the Zoning Officer that permanent easements are in effect that guarantee each use the right to use any shared driveways or parking including:

¹³⁹ MINNEAPOLIS, MINN., CODE OF ORDINANCES, ch. 541, art. I, § 541.170(e)(2) (2018).

[Amended 5-14-2015 by Ord. No. 2222, approved 5-14-2015]

- (1) A covenant must be executed and recorded with the Cumberland County Recorder of Deeds guaranteeing that the owner [will] shall provide the additional spaces directly or by payment of in-lieu fees, where permitted, if the Planning Commission, upon thorough investigation of the actual use of parking spaces at the building within two years of initial occupancy, recommends to Council that the approved reduction be modified or revoked. Said covenant shall meet the same requirements for covenants set forth in other sections of this document. The Borough [must] shall document insufficient parking supply by showing occupancy rates over 98% for at least two consecutive hours on at least three separate days within a single month.
- (2) Fee of guarantee. The owner shall pay a fee at the time of permit plan approval that will be applied towards the cost of a parking study of actual parking accumulation to be carried out within one to two years of occupancy.
- (3) Exception. The covenant guaranteeing either additional spaces or payment of in-lieu fees [Subsection C(1) above] and the fee for follow-up parking study [Subsection C(2) above] may be waived when the Borough [will] shall certify that previous experience of similar shared parking projects indicates it is unlikely a serious deficiency would result.

Editor's Note: § 255-210 to § 255-215 are omitted because these sections remain fully unaltered and are not relevant to this project.

Section 10. Severability.

The provisions of this ordinance and of the Code adopted hereby are severable, and if any clause, sentence, subsection, section, article, chapter or part thereof shall be adjudged by any court of competent jurisdiction to be illegal, invalid or unconstitutional, such judgment or decision shall not affect, impair or invalidate the remainder thereof but shall be confined in its operation and application to the clause, sentence, subsection, section, article, chapter or part thereof rendered illegal, invalid or unconstitutional. It is hereby declared to be the intent of the Borough Council that this ordinance and the Code would have been adopted if such illegal, invalid or unconstitutional clause, sentence, subsection, section, article, chapter or part thereof had not been included therein.¹⁴⁰

Section 11.

Enforcement shall be handled by the Borough's Codes Office in the Community Development Department.¹⁴¹ Once a property owner receives a Notice of Violation, the property owner has until the expiration of that Notice to fix the violation.¹⁴² If, at the expiration of the Notice, the violation is not fixed, then the property owner will be given a citation.¹⁴³

¹⁴⁰ CARLISLE, PA., ZONING CODE ch. 1, art. I, § 1-3 (2005). (Direct quote from a different section of Carlisle's Zoning Code to be consistent.)

¹⁴¹ *Code Enforcement*, Carlisle Pennsylvania, https://www.carlislepa.org/residents/code_enforcement.php (last visited on Oct. 24, 2020).

¹⁴² *Code Enforcement*, Carlisle Pennsylvania, https://www.carlislepa.org/residents/code_enforcement.php (last visited on Oct. 24, 2020).

¹⁴³ *Id.*

Section 12.

All ordinances or parts of ordinances are repealed insofar as they are inconsistent with the amendment or addition of sections 1-13, sections 2501-2504, section 255-12, sections 255-201 to section 255-205, and sections 255-207 to 255-209.

Section 13.

This ordinance shall take effect in 90 days. The electric vehicle parking requirements under this article shall go into effect two years after the article was initially adopted as an ordinance for municipal uses and five years after the article was initially adopted as an ordinance for other residential uses. The off-street maximum parking requirements under this article shall go into effect two years after the article was initially adopted as an ordinance for municipal uses and five years after the article was initially adopted as an ordinance for other residential uses.