



5-2014


# All That Sprawl, Y'all: An Analysis of Development on Steinwehr Avenue and York Street in Gettysburg, Pennsylvania, from 1971 to 2014

Elizabeth K. Emmons  
*Gettysburg College*

Kalley S. Hansel  
*Gettysburg College*

Daly Simpson  
*Gettysburg College*

Follow this and additional works at: [https://cupola.gettysburg.edu/student\\_scholarship](https://cupola.gettysburg.edu/student_scholarship)

 Part of the [American Studies Commons](#), [Community-Based Research Commons](#), [Demography, Population, and Ecology Commons](#), [Environmental Indicators and Impact Assessment Commons](#), [Geography Commons](#), [Place and Environment Commons](#), [Sociology of Culture Commons](#), [Tourism and Travel Commons](#), and the [Urban Studies and Planning Commons](#)

**Share feedback about the accessibility of this item.**

---

Emmons, Elizabeth K.; Hansel, Kalley S.; and Simpson, Daly, "All That Sprawl, Y'all: An Analysis of Development on Steinwehr Avenue and York Street in Gettysburg, Pennsylvania, from 1971 to 2014" (2014). *Student Publications*. 228.  
[https://cupola.gettysburg.edu/student\\_scholarship/228](https://cupola.gettysburg.edu/student_scholarship/228)

This is the author's version of the work. This publication appears in Gettysburg College's institutional repository by permission of the copyright owner for personal use, not for redistribution. Cupola permanent link: [https://cupola.gettysburg.edu/student\\_scholarship/228](https://cupola.gettysburg.edu/student_scholarship/228)

This open access student research paper is brought to you by The Cupola: Scholarship at Gettysburg College. It has been accepted for inclusion by an authorized administrator of The Cupola. For more information, please contact [cupola@gettysburg.edu](mailto:cupola@gettysburg.edu).

---

# All That Sprawl, Y'all: An Analysis of Development on Steinwehr Avenue and York Street in Gettysburg, Pennsylvania, from 1971 to 2014

## Abstract

The advent of the automobile transformed the American landscape in the 20th century. In conjunction with the increasing importance of the automobile, numerous post-WW II government programs such as the Interstate Highway System encouraged suburban sprawl. Towns and cities adjacent to tourist attractions, known as gateway communities, face unique problems caused by sprawl. Gettysburg, Pennsylvania, is an example of a gateway community as it includes the Gettysburg National Military Park. Two study sites, portions of Steinwehr Avenue and York Street, were studied to analyze the effects of sprawl in Gettysburg. The sites were analyzed using ArcGIS, data compiled from historic phonebooks, and discussions with local business owners. Development along York Street exemplifies an auto-centric culture with many regional and national chain establishments set back from the road. Steinwehr Avenue represents a walkable community comprising on-street parking, sidewalks, and local “mom-and-pop” establishments. Trends associated with categories of businesses varied between the two sites and revealed different development patterns. We predict that York Street will continue to sprawl while Steinwehr Avenue development will be limited due to its close proximity to the battlefield.

## Keywords

car, Gettysburg, development, Gettysburg National Military Park, tourism, suburban sprawl, sprawl, commercialism, transportation, ArcGIS, community

## Disciplines

American Studies | Community-Based Research | Demography, Population, and Ecology | Environmental Indicators and Impact Assessment | Environmental Sciences | Geography | Place and Environment | Sociology | Sociology of Culture | Tourism and Travel | Urban Studies and Planning

## Comments

Environmental Studies Thesis

All That Sprawl, Y'all:  
An Analysis of development on Steinwehr Avenue and York Street  
in Gettysburg, Pennsylvania, from 1971 to 2014

Betsy Emmons, Kalley Hansel, Daly Simpson  
Environmental Studies 400 Senior Seminar Capstone  
Professor John Commito

Honor Code: I affirm that I have upheld the highest principles of honesty and integrity in my academic work and have not witnessed a violation of the honor code.

## Abstract

The advent of the automobile transformed the American landscape in the 20th century. In conjunction with the increasing importance of the automobile, numerous post-WW II government programs such as the Interstate Highway System encouraged suburban sprawl. Towns and cities adjacent to tourist attractions, known as gateway communities, face unique problems caused by sprawl. Gettysburg, Pennsylvania, is an example of a gateway community as it includes the Gettysburg National Military Park. Two study sites, portions of Steinwehr Avenue and York Street, were studied to analyze the effects of sprawl in Gettysburg. The sites were analyzed using ArcGIS, data compiled from historic phonebooks, and discussions with local business owners. Development along York Street exemplifies an auto-centric culture with many regional and national chain establishments set back from the road. Steinwehr Avenue represents a walkable community comprising on-street parking, sidewalks, and local “mom-and-pop” establishments. Trends associated with categories of businesses varied between the two sites and revealed different development patterns. We predict that York Street will continue to sprawl while Steinwehr Avenue development will be limited due to its close proximity to the battlefield.

## Introduction

Until the invention of the automobile in the mid-1800s, practical commuting distance was limited to the range of a horse and carriage (Kunstler 1993). During World War II roughly 70% of metropolitan Americans lived in central cities. By 1990 only 40% of metropolitan Americans, and only 31.3% of all Americans, lived in central cities (Lewyn 2000). This trend directly correlates to car ownership statistics: in 1898 there was one car for every 18,000 people, compared to one car for every eight people in 1923 (Kihlstedt 1980). Today there is 1.27 cars per person (The World Bank 2013). The automobile completely changed the American landscape by allowing for endless expansion and freedom of development. Seeking space, many families moved out of cities and the jobs naturally followed. In the 1980s, 95% of the 15 million new office jobs created were in suburbs; today approximately two-thirds of all new jobs are located in the suburbs (Lewyn 2000). This explosion of suburbs is termed sprawl, which is further defined as “the movement of people (especially middle-class families) and jobs from older urban cores to newer, less densely populated, more automobile-dependent communities generally referred to as suburbs” (Lewyn 2000).

Through the passage of legislation such as the Interstate Highway Act and series of Housing Acts and programs such as the Federal Housing Administration mortgage insurance program and the GI Bill, the federal government effectively encouraged sprawl. Passed in 1956, the Interstate Highway Act commissioned the creation of 41,000 miles of roads to connect cities with more than 50,000 inhabitants and the widening of innumerate local roads (Kunstler 1993). The Federal Housing Act of 1949 offered developers profit incentives to build large suburban housing developments. Developers responded by destroying one million acres of farmland per year in the 1950s (Jones 1980). With mortgage rates at a record low due to the Federal Housing Administration's insurance program and the GI Bill, cheap new construction in a safe suburban neighborhood helped many families achieve their American Dream (Jones 1980).

American cities experienced a mass exodus following the end of World War II due to the advent of the automobile and development of suburbia due to the aforementioned events. Considered one of the Great Migrations of American history, millions of American families abandoned "old giants" like New York City, Chicago, Philadelphia, and Detroit in favor of suburbs just a car ride away (Suarez 1999). These cities reached historic population heights in 1950 due to booming industries and cheap rent. From a population of 2,000,298 in 1950, Detroit shrunk in half by 1990 with a population of 1,027,974 (Suarez 1999). Other old cities such as Philadelphia and Chicago experienced a similar trend. Newer cities in the west such as Houston and San Antonio experienced population growth through the 1990s due to annexation of land. The omnipresence of the automobile drastically changed American cityscapes.

In addition to suburbs, gateway communities emerged as a result of the automobile along with many other factors. Gateway communities are towns and cities that border public lands such as national and state parks, wildlife refuges, historic sites, and wilderness areas (Howe et al.

1997). Today the 7,645 local Gettysburg inhabitants share their town with 3.6 million tourists annually (U.S. Census Bureau 2012; “Tourism in Adams County, PA” 2014) Just as in the suburbs, gateway communities can create similar social and scenic ills if unrestricted development is allowed. When park gateway communities exclusively rely on tourism to carry the local economy, parks are exposed to the risk that the tourism industry, if developed unsustainably, will tarnish the integrity of the park itself (Lee et al. 2012). In an effort to cater to tourists’ needs, the community may in fact deter tourists by hyper-commercialization. A 1994 survey of national park superintendents revealed that 85 percent of America’s national parks are experiencing pressure from outside their boundaries (Howe et al. 1997). Civil War battlefields are particularly threatened; one-fifth of the nation’s 400 most significant Civil War battlefields have been lost to development (Howe et al. 1997). The congressional panel commissioned in the survey warned that “the nation’s Civil War heritage...is disappearing under buildings, parking lots, and highways” (Howe et al. 1997). One scholar asserts that if Gettysburg is America’s most notorious Civil War battlefield, it is also the most commercialized (Howe et al. 1997). The challenge facing many gateway communities is to retain a high quality of life and rich culture for both local inhabitants and visitors while preserving the integrity of the land. If developed senselessly gateway communities could mirror failures experienced by the suburbs. Initially visited via horse-drawn carriage, Gettysburg next experienced growth as a gateway community via rail travel.

Rail travel was the dominant transportation mode of Gettysburg tourists until the end of World War II when it was phased out by the automobile. The Gettysburg Railroad Line opened on December 16, 1858, after becoming incorporated by an act of the Pennsylvania Legislature on March 24, 1851 (Williams 1952). The Gettysburg Railroad Line ran 16 miles to the Hanover

Branch Line, connecting to the Northern Central Railroad providing service south to Baltimore and east to Philadelphia via Harrisburg (Bennett 1999). Passenger service ended on December 31, 1942, due to the overwhelming popularity of the automobile (Bennett 1999).

Battlefield roads converted into 20 avenues in 1895 by the War Department were the first steps in tailoring Gettysburg to an automobile-centered destination (Weeks 2003). The building of the Lincoln Highway from Boston to San Francisco in 1913 provided motorists direct access to Gettysburg. Of the ten roads that converge in Gettysburg's central Lincoln Square, the Lincoln Highway, also known as York Street, is the only road not bounded by the battlefields (Weeks 2003). The National Park Service licensed tours by private bus companies and designed auto tour routes in 1949. By the 1970's 10 road-side exhibits featured "push button" narration boxes so that motorists could tour the battlefields without leaving the comfort of their own cars (Weeks 2003). The automobile transformed the nature of tourism in Gettysburg.

From the period immediately following the Gettysburg battle in 1863 until 1894, the battlefields had no formal protective agency or title of distinction. Congress established the Gettysburg National Military Park in 1895 under the supervision of the War Department's Gettysburg National Park Commission (Weeks 2003). In 1933 the National Park Service assumed control of the Gettysburg National Military Park and continues to do so at present (Weeks 2003). The Gettysburg Historic District program was created by Congress in 1990 to combat infringement of development on park boundaries (Howe et al. 1997). To investigate the influence the automobile has had on sprawl, two study sites were chosen for this project, Steinwehr Avenue and York Street. Both streets include portions within the Historic District of the Gettysburg Borough. These land parcels located in the district are subject to different zoning ordinances than land parcels outside of the district, thus have developed differently. It is also

important to note that while the entire stretch of Steinwehr Avenue included in our study is located within the borough of Gettysburg, only a small section of York Street included in our study, from Hanover Street to Rock Creek, falls within the borough. The parcels of land outside of this district on Steinwehr Avenue are enclosed by the Gettysburg National Military Park, unlike York Street. Due to this greater availability of land, the development of York Street was expected to be more spread out and influenced by the automobile in comparison to Steinwehr Avenue.

## Methods

We analyzed development on Steinwehr Avenue and York Street from 1971 to 2014 (Figure 1). The portion of Steinwehr Avenue that was studied ranged from where Steinwehr Avenue branches off from Baltimore Street to the current intersection of Steinwehr Avenue and Long Lane. York Street was studied from where it branches off from Hanover Street and the current intersection of York Street and Route 15.

Images were obtained from three locations: Earth Explore, Penn Pilot, and Google Earth (Tables 1, 2). The images were georeferenced to a shapefile, provided by the Gettysburg Environmental Studies Department and created by PennDOT, containing major roads in Adams County, Pennsylvania. While georeferencing, State Plane Pennsylvania South (meters) was used as a projection. Slightly different years in the 1970s were used for the two roads due to limited available and usable aerial photography.

Analysis of buildings began after the images were properly aligned with the Gettysburg road network. Editable shapefiles were created in order to draw polygons overtop the aerial image. Buildings were visually detected after considering shadows and color. Google Earth



‘street view’ was often referenced to better qualify space between buildings. A second opinion was inquired within the study group after the first editing session and changes were made based upon discussion regarding different plots of land. Final edits regarding polygon placement were made by cross referencing street address data collected from the Adams County Historical Society.

Spatial change over time required shapefiles to be copied and edited to each specific photo. Aerial photos were well aligned but not perfectly so. In order to adjust for this, each shapefile needed to be copied and then edited for different years. For example, the 2003 York Street map contains buildings observed in 1971, 1989, and 1994. Polygons drawn for these years were slightly offset in the 2003 image so each shapefile was copied and then re-edited in order to line up properly with the 2003 image. Due to the poor resolution and alignment issues associated with the aerial photography, these figures were used solely as a visual representation and not for numerical data.

Numerical data were obtained through historical phonebooks. Historical phonebooks for 1971, 1974, 1989, 1994 and 2003 were studied at the Adams County Historical Society. Each phonebook was analyzed page by page in order to identify Steinwehr Avenue and York Street addresses. When such an address was found, the name and address of the entry was recorded. Data were then entered into an Excel spreadsheet categorized by year and street location. Human error during this process was anticipated, so data were examined temporally by year. If a building was missing for a single year, but was present during years directly before and after, it was determined that the building was missed during the phonebook scanning process and that it was indeed the same establishment occupying that building.

The 2014 data was collected by walking or driving down each street and recording the following information: street address, residential usage or name of the commercial establishment, and whether or not parking was available. Vacant buildings were also recorded during the field observations in 2014, but information was later dismissed because phonebooks did not include information for vacant buildings. Buildings were then assigned one of seven categories: auto, food, service, lodging, residential, retail, or tourism. Establishments categorized as auto included anything related to the automobile such as gas stations, auto insurance companies, car dealerships, car rental establishments, and auto repair. Establishments categorized as service included insurance agencies, health services, religious centers, real estate agencies, financial services, laundromats, and others. Tourism establishments included tour centers and museums. Each building, except for those that were part of the residential category, was then assigned to be local or non-local. Local establishments included ‘mom and pop’ stores and other establishments with locations limited to Adams County. Non-local establishments were those that conduct business in multiple states.

Pivot tables were created in Microsoft Excel to analyze establishment composition at each study site. Bar graphs were made from these tables to show the number of buildings per category for each year, and also the number of local and non-local establishments for each category type per year. A table containing attributes of walkability was created using descriptions outlined by such scholars as Jeff Speck, William Whyte, James Kunstler, and Folke Kihlstedt (Table 3). If an attribute applied to Steinwehr Avenue or York Street based upon observation, a check mark was placed in that column (Table 3).

## Results

### *Maps*

A majority of the Steinwehr Avenue development was within the split from Baltimore Street and the intersection of Long Lane (Figure 2). More buildings were detected in the aerial images than were recorded from the phonebooks. Additional buildings were detected in 1989 from 1974, signifying the only time period which experienced net growth on Steinwehr Avenue (Figure 3). From 1994 to 2003, the decline in total number of buildings became evident with the loss of the 'Home Sweet Home Motel' (Figures 4, 5). From 2003 to 2013 many additions were placed on some of the existing buildings; however, there was still a net decline in the total number of buildings (Figure 6).

York Street developed from the historical section of town out to the intersection with Route 15. The 1971 map showed buildings clustered close to the center of town with a few homes scattered in the direction of Route 15 (Figure 7). There was a mobile home park about two-thirds of the way to Route 15, traveling northeast, which grew in number of homes between 1971 and 1989 (Figure 8). The Gettysburg Village Green Nursing Center and a strip mall were easily visible in 1989 as well, located on either side of the mobile home park. The 1994 image showed the addition of hotels sprawled off York Street near the Nursing Center, and the addition of Wal-Mart down the road (Figure 9). Growth was clearly seen in the 2003 image as Giant Food, Sheetz, and Hampton Inn appeared (Figure 10). The construction of Giant Food resulted in about half of the mobile home park being demolished. This mobile home community was completely gone in the 2013 image, and the Villas at Gettysburg were seen southwest of the Giant Food (Figure 11). By 2013 it was evident that the total number of buildings had increased from 1971 to 2014.

*Phonebook data: Steinwehr Avenue*

From 1971 to 2014 the number of buildings on Steinwehr Avenue decreased, with the percentage of local establishments remaining fairly consistent (Figures 12, 13). However, the frequency distribution of the type of building changed considerably. The number of residential buildings peaked in 1971, comprising over half of the total 60 buildings. The remaining buildings were distributed between auto, food, lodging, retail and tourism, with no buildings allocated to service. Almost all of the establishments were local with only three non-local establishments, all of which were automobile or lodging (Figure 12).

From 1971 to 1974, the consistent trend of decreasing residential buildings began. During these three years the first five service establishments were introduced. The number of lodging and food establishments also increased, with the other categories remaining the same. In 1971 all of the food establishments were local and by 1974 two out of the five food establishments were non-local.

The continued trend of elimination of residential buildings was observed in 1989. The number of automobile establishments decreased from three to one, with the only remaining establishment being non-local. The number of food establishments more than doubled from 1974 to 1989 with most establishments being locally owned. By 1989 only two service establishments remained, of which one was present in 1974. Retail establishments quadrupled with all additional establishments being locally owned. This was the last time period where the total number of establishments increased from the previous time period, yet it was only by one establishment. By 1994 food, retail, and tourism establishments all increased. All of these additional establishments were local. The total number of service establishments remained the same; however, there was a one-to-one ratio of local to non-local service establishments. These

additional buildings were offset by the decrease in residential buildings, leading to a net decrease in the total number of buildings.

By 2003 there was a 66% decline in residential buildings. However, the number of retail establishments more than doubled (Figure 13). The other categories stayed fairly consistent, with the exception of service which had been completely phased out. This led to an overall decrease in the total number of buildings. All of the retail establishments continued to remain locally owned, as did all tourism establishments and the one remaining auto establishment.

In 2014 no buildings on Steinwehr Avenue were used as residential spaces (Figure 13). The number of retail stores also declined by five establishments. Auto, food, and tourism each increased by a single establishment, and lodging increased by three. This led to a net loss of ten buildings from 1971 to 2014. Of the 50 buildings present in 2014, only 10 of them were non-local. The majority of these establishments was food and lodging. The other two were in auto and retail.

*Phonebook data: York Street*

York Street shows a shift from local to non-local establishments from 1971 to 2014, as well as a shift in distribution of the types of buildings (Figures 14, 15). In 1971 a majority of York Street was composed of residential buildings, making up three-quarters of the total number of buildings. Service establishments, such as insurance agencies and laundromats, made up 17% of the total number of buildings. A small percentage of establishments categorized as auto and food round out 1971. There were no buildings used for lodging or retail in 1971. Also, more than half of the 24 York Street establishments in 1971 were locally owned, with a majority of them falling into the service category.

Retail and lodging establishments were observed for the first time on York Street in 1974, consisting of three of the four establishments added. All three of these establishments were locally owned. Still, the majority of York Street in 1974 was composed of residential buildings and service buildings. 15 of the 17 service buildings were locally owned along with the only two food establishments located on York Street in 1974 (Figure 14). The only category to have more non-local than local establishments on York Street in 1974 were automobile-related establishments.

The total number of buildings increased sharply from 1974 to 1989, going from 89 to 117. Although the number of service establishments remained constant between 1974 and 1989, there was a shift from local to non-local (Figure 14). The number of retail establishments increased from one to six, all being local. There was an influx of automobile establishments as the number of establishments nearly doubled from 1974 to 1989. The number of lodging establishments also doubled in number, all of which were locally owned establishments. The largest increase of types of buildings from 1974 to 1989 was in the number of residential buildings (Figure 15).

The year 1994 marks the first decrease in automobile-related establishments; however, there is still almost a 20% increase in the total number of buildings (Figure 15). Food and retail establishments more than doubled. Lodging, residential, and service establishments also increased. A shift from local to non-local lodging was observed as the number of non-local hotels exceeded the number of local ones. Overall, there was still a greater number of local establishments than non-local establishments in 1994 (Figure 14).

Again the number of food establishments more than doubled between 1994 and 2003, even though the total number of buildings decreased (Figure 15). This decrease can be attributed

to the number of residential buildings also decreasing by half. There was little change in the number of automobile, retail, and lodging establishments. The total number of local establishments was still greater than the non-local establishments. However, there was a shift in food, lodging, and retail where the number of non-local establishments outweighed the number of locally owned establishments. By 2003 all of the hotels on York Street were operated by non-local corporations. The only reason the total number of local establishments still outweighed the number of non-local establishments was because 85% of services were locally owned (Figure 14).

By 2014, 69% of the 88 establishments were non-local (Figure 14). This drastic shift can be attributed to the fact that the ratio of local to non-local services was about even by this time. In addition the ratio of non-local to local automobile establishments also increased, resulting in a four to one ratio. The number of hotels also doubled, all of which were non-local. The number of retail establishments also increased with 66% of the retail establishments being non-local (Figures 14, 15). All of these increases in non-local establishments led to a 23% change in the distribution of local and non-local establishments. In 2014 there was also the addition of one tourist establishment that was locally operated. From 1971 to 2014 the total number of establishments more than tripled.

## Discussion

### *Trend Interpretations*

There are many distinct differences between York Street and Steinwehr Avenue in both the distribution of the type of buildings and the ratio of non-local to local establishments. Throughout the study period there was a greater number of automobile establishments on York

Street compared to Steinwehr Avenue. This shows that York Street was more automobile oriented than Steinwehr Avenue. When looking at the historical data for York Street it appeared as though the automobile businesses in Gettysburg were resilient from the 1970s to the 1990s as the American automobile industry was suffering. As a result of the Arab Embargo in 1973 caused oil prices to skyrocket (Stobaugh and Yergin 1983). The number of automobile-related establishments stayed fairly consistent at both study sites, as did the ratio of non-local to local establishments. During this time, if an automobile establishment went out of business it was quickly replaced by another automobile-related business. For example, Automotive Supply Co on York Street was replaced by C&S Service Center between 1989 and 1994. Local Gettysburg automobile businesses were not so resilient when the 2007 economic downturn hit, resulting in the Great Recession of 2008-2009 (Dooley et al. 2009; Gulati et al. 2010). During the Great Recession, the automobile industry was one of the first to be affected. The United States government tried to stimulate this part of the economy by enacting a \$3 billion stimulus program called "Cash for Clunkers" in 2009 (Li et al. 2011). Although this program briefly helped to stimulate the automobile industry, many of the locally owned automobile-related businesses were forced out of business or had to join a larger chains in order to survive. This trend was evident in the change of the ratio of non-local to local businesses from 2003 to 2014, which shifted from about a one to one ratio to a four to one ratio.

There was a clear difference in the ratio of non-local to local businesses between Steinwehr Avenue and York Street regarding the food industry, even though the number of food establishments was generally the same for both study sites. Many of the non-local restaurants on both streets contain a drive-thru component which was not popular until the post-World War II era. The concept of the drive-thru evolved from the pre-existing roadside stand and highway



coffee shop, which developed as a result of the automobile (Jakle and Sculle 1999). Not only did the rising popularity of automobiles encourage the development of fast food restaurants post-World War II, but it also encouraged the growth of restaurant chains (Jakle and Sculle 1999). This trend was very clear on York Street as the majority of restaurants, such as McDonald's and Wendy's, are non-local establishments with a drive-thru window. This trend is also observed on Steinwehr Avenue, but on a smaller scale. Toward the end of our study site on Steinwehr Avenue, moving towards Long Lane, the same type of restaurants can be seen. These restaurants are removed from the historical residential area and host large parking lots. This development shows that Steinwehr Avenue also felt the effects of the automobile even though area for development has been limited by the presence of the battlefield.

Only local 'mom-and-pop' lodging establishments were available on Steinwehr Avenue during 1971. Local motels were made legitimate in the professional literature as small, independent, owner-managed motels that dominated the roadside-lodging industry between the 1930s and 1960s (Jakle et al. 1996). The main consumers for mom-and-pop motels were vacationing nuclear families (Jakle et al. 1996). Steinwehr Avenue was a hot spot for mom-and-pop motels to thrive because tourists could stay close to the battlefield and easily access meals and souvenirs. The shift from local to non-local motels on Steinwehr can be explained by the growing popularity of co-ownership of motels. Co-ownership became popular in the motel industry following the huge success Howard Johnson experienced with his restaurants (Jakle et al. 1996). Local operators were trusted by big time names such as Howard Johnson because locals held vested interests and could be counted on to be attentive to the business (Jakle et al. 1996). Interestingly, a Howard Johnson's Restaurant was present on Steinwehr Avenue in 1971 which happened to be the franchise's most popular year. Similar trends continued until 2014

when there was a one to one ratio of local to non-local lodging establishments. These establishments were a mix of franchised motels such as the Quality Inn, co-ownership motels such as the TraveLodge, and locally owned businesses including the Dobbin House Bed and Breakfast (Jakle et al. 1996). Motels that had a co-ownership were still classified as non-local businesses.

The shift of locally owned motels to franchised hotels was a common trend throughout the United States (Jakle et al. 1996), and was very apparent on York Street. A non-local hotel did not appear on York Street until 1994. At this time three non-local lodging establishments appeared, including the Comfort Inn. This hotel is part of the great franchise, Choice Hotels, which changed its name from Quality International in 1990. This was one of the first and biggest motel franchises in the United States (Jakle et al. 1996). In 1962, only 2% of the motels in the United States were associated with a larger organization; however, by 1987 64% of the motels found themselves to be under the supervision of a larger entity (Jakle et al. 1996). This correlates with the growth of the travel industry during this time period. Lodging establishments focused on development, sales and marketing, advertising, communications, quality assurance, training and education, reservations, graphic design, and corporate identity as they began to franchise and form chains (Jakle et al. 1996). Franchises presented a lower risk to a consumer during the decision process because quality was assumed with such name recognition. This is important because consumers invest more time and money when considering lodging arrangements compared to other aspects of the trip such as food and retail choices (Jakle et al. 1996). This shift is clearly shown on York Street as all of the lodging options shifted to non-local chains by 2003 and then doubled in number by 2014.

Similar to lodging, the retail industry showed a trend toward non-local businesses on York Street. Both study sites illustrated parallel trends in the number of retail establishments during the study period. In 1971 neither study site had many retail stores, with two on Steinwehr Avenue and zero on York Street. By 2014 retail became one of the largest categories comprising 13% of the total buildings on York Street and 38% on Steinwehr Avenue. The two study sites displayed opposite trends with respect to ratio of non-local to local businesses. Of the 21 retail establishments on York Street, 15 are classified as non-local. The presence of a single national retail establishments, such as Wal-Mart, can acutely change the composition of a town . These chains affect local labor markets, consumer prices, product selection, local and global competitors, and suppliers (Basker 2007). In addition, chains divert money away from the local economy. Large retail stores have many advantages including lower prices, larger scale and better technology. They are able to operate more efficiently than small establishments, allowing them to offer lower prices. This allows the businesses not only to expand faster, but also to have the ability to push local competitors out of business as their prices are typically 10% lower (Basker 2007). The massive expansion of Wal-Mart was made possible by the increased use of automobiles. By 2005, 46% of American's lived within five miles of a Wal-Mart, and 88% were within 15 miles (Basker 2007). This trend was also seen on York Street, as an automobile is required to get to the Wal-Mart and other large retail stores. Additionally, there are very few small businesses located on York Street by 2014. Steinwehr Avenue differs in that consumers are able to walk to all of the retail stores. These stores are also specialty stores associated with the nearby battlefield. This uniqueness allows local retail stores to prosper even though Wal-Mart is located within close proximity.

A trend apparent in both the phonebook data and observations was that Steinwehr Avenue buildings previously used as residential homes slowly transitioned into commercial spaces. This was evident between 1994 and 2003 when there was a dramatic decline in residential buildings and a large increase in commercial buildings, yet the total number of buildings declined. This change in usage can also be observed while walking down Steinwehr Avenue. Not only are many of the retail establishments in old residential buildings, but many of these buildings have a separate access entrance to the second floor. This suggests that there were two residences at one point in time, or that there was an apartment upstairs with a business downstairs. This type of mixed-use within a single building could help to increase the economic value of the property as well as increasing pedestrian travel (Moudon et al. 1981).

There were no significant trends for the number of residential buildings on York Street, as they remained fairly constant, yet the location of the residential buildings did change. The drastic decrease in residential buildings from 1994 to 2003 can be attributed to the destruction of half of the trailer park when Giant Food was built. Even though the remainder of the trailer park was destroyed by 2014, there was an increase in residential buildings which can be accredited to the new development, the Villas at Gettysburg, built next to Giant Food. The destruction of the trailer park could have been an attempt to raise property values (Munneke & Slawson 199), as well as to backspace for the shopping center.

### *Walkability and Auto-Centered Culture*

Most historians agree that civilizations have formed cities for the last eight thousand years for the seven following purposes: industry, governance, commerce, safety, culture, companionship, and religion (Garreau 1991). To attract residents, foster the economy, and encourage cultural growth, cities must satisfy these seven needs. To give pedestrians a fighting

chance these cities must be walkable. Speck's General Theory on Walkability maintains that four conditions must be satisfied in order for a city or downtown area to be classified as 'walkable': it must be useful, safe, comfortable, and interesting (Speck 2012). A useful walk means that a variety of errands can be completed within a short walking distance. Pedestrians' safety must be a priority, so maintained sidewalks, crosswalks, and narrow lanes are necessary attributes (Speck 2012). Comfort will be achieved by designing cozy narrow spaces rather than wide-open spaces that tend to deter pedestrians. Lastly an interesting walk means that sidewalks are full of signs of humanity and pedestrians are visually stimulated by a variety of building features (Speck 2012). To compliment his outline of four conditions that must be satisfied in order for a city to be walkable, Speck also composed a list of ten steps of walkability. The steps emphasize pedestrian and bicyclist safety, street aesthetics, and mixing the types of establishment. A table was created using a compilation of suggestions of walkable attributes by such scholars as Jeff Speck, William Whyte, James Kunstler, and Folke Kihlstedt (Table 3). Steinwehr Avenue satisfies all sixteen of these attributes, while York Street only satisfies two. Its wide lanes, lack of sidewalks, and large parking lots clearly cater to motorists and sacrifice pedestrian safety for ease of automobile mobility.

Garreau asserts that one of the seven purposes of a city is to ensure the safety of its residents (Garreau 1991). The safety of pedestrians is key to making a city walkable as Speck outlined. While many families flee the city for the perceived safety of the suburbs, they are simply exchanging one evil for another. The number of annual homicides in a city generally equates to the number of annual deaths at the hands of the automobile in the suburbs (Speck 2012). A city can become more walkable and safe for pedestrians if sidewalks become a priority

in city planning. A balance must be achieved between the two interacting components of street life-movement of the automobile and movement by residents on foot.

Long before the advent of the automobile ancient Greek and Roman societies developed traditional public spaces for residents to gather and move about the community. Sidewalks were initially developed to separate the building block from the carriageway (Mateo-Babiano et al. 2005). The first sidewalk dates back to Pompeii in 200 B.C. Sidewalks there were built to separate pedestrians from moving chariots. The earliest record of written laws concerning street design hails from Rome in 100 B.C., wherein sidewalks were mandated to have a minimum width of 15 feet (Mateo-Babiano et al. 2005). Roman streets were flanked by elevated sidewalks which comprised as much as half of the total street width (Mateo-Babiano et al. 2005). Walkable downtowns include this key feature to boost pedestrian traffic by segregating automobile traffic. Historic Steinwehr Avenue contains this key attribute of a walkable downtown. Sidewalks on both sides of the two lane street allow pedestrians to peruse the myriad retail shops, restaurants, and tourist attractions. Sidewalks are connected by wide, clearly marked crosswalks to allow pedestrians access to establishments on both sides of the street. Small hand painted signs advertise the majority local establishments. Affixed to storefronts or hanging over the sidewalk, these signs are scaled to be seen by pedestrians walking underfoot or motorists driving within the 25 MPH zone. The building establishments are adjacent to the sidewalks devoid of lengthy paths or driveways that are required for an auto-centered location. Parking needs are met by small lots accommodating a dozen automobiles located behind the establishments, as well as a section of on-street parking spaces. The size of the establishments' signs, the placement of the buildings in close relation to the roads, and the presence of crosswalks and sidewalks make Steinwehr Avenue appealing to pedestrians.

Gettysburg National Military Park aims to conserve the history of the battle that occurred in the 1800s. A primary reason for protecting natural and cultural resources is to ensure the availability of such resources for the enjoyment of future generations (Stynes and Sun 2001). The protection of natural lands has and continues to attract visitors to GNMP and in turn requires establishment to aid needs of tourists. Therefore, tourism developments have grown up in gateway communities (Stynes and Sun 2001). Steinwehr Avenue represents such development as tourism establishments occupied 10% of buildings in 1971 and 12% of buildings in 2014. This development is considered to be related to proximity with GNMP as Steinwehr Avenue runs through the South End parcel of GNMP. Before 2014 there were no existing tourism related establishments on York Street and today only one such establishment is found on York Street. The development of York Street has differed from other roads leading into the Borough of Gettysburg because it is the only feeder into town that does not border the national park. In stark contrast to the building establishments along Steinwehr Avenue, the establishments along York Street developed much differently. Sidewalks end just outside of the Gettysburg Borough, making a clear statement that the sprawling portion of the street is not pedestrian friendly. This auto-centered portion contains three lanes at its widest point in addition to the two lanes that flank the road shoulders. These additional lanes eliminated lanes once used for convenient on-street parking spaces that exist on Steinwehr Avenue. Not only are multi-lane streets more difficult to cross on foot, they also make speeding easier for drivers (Speck 2012). Towering signs line York Street advertising the predominantly non-local establishments nearby. Unlike the signs on Steinwehr Avenue that cater to pedestrians, these signs must be large enough to be seen below by motorists whizzing by within the 45 MPH zone. Establishments are set back far from the road so motorists must drive up a driveway to access them. Once the automobile is

parked among dozens of others in a vast parking lot, the driver must maneuver the lot on foot often hundreds of yards away from the entrance of the establishment. Missing sidewalks, establishments' far proximity to the roadside, and wide lanes with a high speed limit are among the reasons York Street is an 'unwalkable' part of Gettysburg.

Grocery stores and department stores along York Street cater to everyday needs and are the most easily accessible by automobile. Giant Food Stores and Wal-Mart are prime examples of stores on York Street that provide a service at a level unmatched by other establishments. Both of these stores are set back far from York Street and have large parking lots to accommodate shoppers' automobiles. The location of Giant and Wal-Mart make it virtually impossible for Gettysburg residents to go about their ordinary errands without the use of an automobile which is a major flaw of current development in Kuntsler's eyes (Kunstler 1994). Wal-Mart, Giant, and Peebles provide goods to automobile customers because they are vastly separated from each other and from downtown Gettysburg. Development of such stores along York Street represents the trend of industry moving away from places of residency (Kunstler 1994). Large asphalt parking lots compose the front 'lawn' of the aforementioned establishments because there is no on-street parking available along York Street. These large parking lots encourage more automobile use and signify a non-walkable area (Kunstler 1994).

An explanation for the differences in development between Steinwehr Avenue and York Street could be the differing zoning regulations. Steinwehr Avenue, in its entirety, falls within the borough of Gettysburg, while only a portion of York Street is contained within the borough. This explains the similar building density, street aesthetics, and presence of sidewalks that Steinwehr Avenue and the portion of York Street from Hanover Street to the location where Rock Creek crosses York Street have in common (Gettysburg 2014). The shift in the widening of



lanes, addition of breakdown lanes along the shoulders of the road, and deletion of sidewalks along York Street occurs past this political boundary. The juxtaposition of the dense, easily walkable historic borough and the sprawling modern highway speaks to evolving American values. Historically a sense of community was valued as evidenced by a mix of densely built residential and commercial buildings on Steinwehr Avenue. Now Americans value privacy and instant gratification which automobiles provide.

Additionally, approximately half of the study site along Steinwehr Avenue, the segment from Baltimore Street to Taneytown Road, falls within the Gettysburg Historic District. Only a small segment of the study site along York Street, from Hanover Street to North 3rd Street, falls within the District (Gettysburg 2014). The Gettysburg Historic District was adopted by the General Assembly of the Commonwealth of Pennsylvania and approved by the Governor of the Commonwealth of Pennsylvania on June 13, 1961 (Gettysburg 2014). The purposes of its creation were to “safeguard Gettysburg’s historic identity...awaken in residents an interest in Gettysburg’s cultural, economic, social, political, and architectural history...stabilize property values...strengthen the Borough’s economy...discourage demolitions...and ensure that size, scale, and design on new construction is in harmony with the old” (Gettysburg 2014).

The Borough of Gettysburg approves code ordinances annually with the most recent version approved on April 14, 2014. The code ordinance includes 27 chapters, including regulation information for signs and billboards, parking, and sidewalks. Within the Historic District, freestanding signs cannot exceed 9 feet, while signs located outside of the Historic District cannot exceed 12 feet (Gettysburg 2014). The signs along Steinwehr Avenue are smaller in size compared to the towering signs along the section of York Street outside of the borough of Gettysburg because of this ordinance, as well as because the speed limit within the borough is 25

MPH so motorists are better able to see the smaller signs compared to the 45 MPH speed limit along York Street. A parking garage and metered on-street and off-street parking serve motorists within the borough. Sidewalks must be provided within the borough and have a minimum width of 5 feet along arterial streets and 4 feet along collector streets (Gettysburg 2014). Again, the portion of York Street included in this study must only adhere to these borough regulations between its separation from Hanover Street until Rock Creek. Sidewalks and on-street parking disappear at this political boundary.

### *Plans for the Future*

In April 2008, the Gettysburg Foundation opened the new GNMP Museum and Visitor Center approximately one mile south of its previous location along Baltimore Street, which was within walking distance from the high concentration of establishments on Steinwehr Avenue (Delta Development Group, Inc. et al. 2009). Due to the relocation of the new Visitor Center out of sight and beyond walking distance from Steinwehr Avenue, a handful of businesses have had to close their doors as the customer base has flocked. In an effort to attract more visitors and keep business thriving, Steinwehr Avenue business owners have recently made concerted efforts to improve the look along the street to appeal to more pedestrians. Lack of pedestrian safety, traffic mobility, and public gathering spaces are listed as key weaknesses (Delta Development Group, Inc. et al. 2009). The Steinwehr Avenue Revitalization Plan includes updating the light fixtures and benches, widening the sidewalks and paving them in a new brick pattern, and replacing the utility lines beneath the street. The Steinwehr Avenue Business Alliance, an organization including all establishment owners along the street, raised \$100,000 to kick start the rejuvenation project. Partnering with Main Street Gettysburg and the Borough of Gettysburg, SABA was able to secure an additional \$5.8 million in state and federal funding (Delta

Development Group, Inc. et al. 2009). Workers broke ground in January 2014 to carry out this first phase of the revitalization. The ultimate goal of the project is to transform Steinwehr Avenue into a “destination that is pedestrian oriented, safe, attractive, and supports vibrant, prosperous establishments” (Delta Development Group, Inc. et al. 2009). This is in keeping with themes presented by Garreau and Speck that make a city walkable.

### *Acknowledgments*

We acknowledge the help of the members of the Adams County Historical Society who provided historical phonebooks and miscellaneous historical information. We also thank the Environmental Studies Department, particularly Professor John Commito, for their guidance and support. We thank our classmates for their feedback voiced throughout the semester. We acknowledge the help of Paul Witt, owner and operator of the Quality Inn, for his insight and personal stories about growing up in Gettysburg. Allie Hagerman of Destination Gettysburg was a great help during the preliminary planning stages of this project. Before the project shifted focus to sprawl and development, Katie Lawhon of the Gettysburg National Military Park was instrumental in providing annual tourism data. The Pennsylvania Department of Transportation led us to the aerial images that were a vital component of our project.

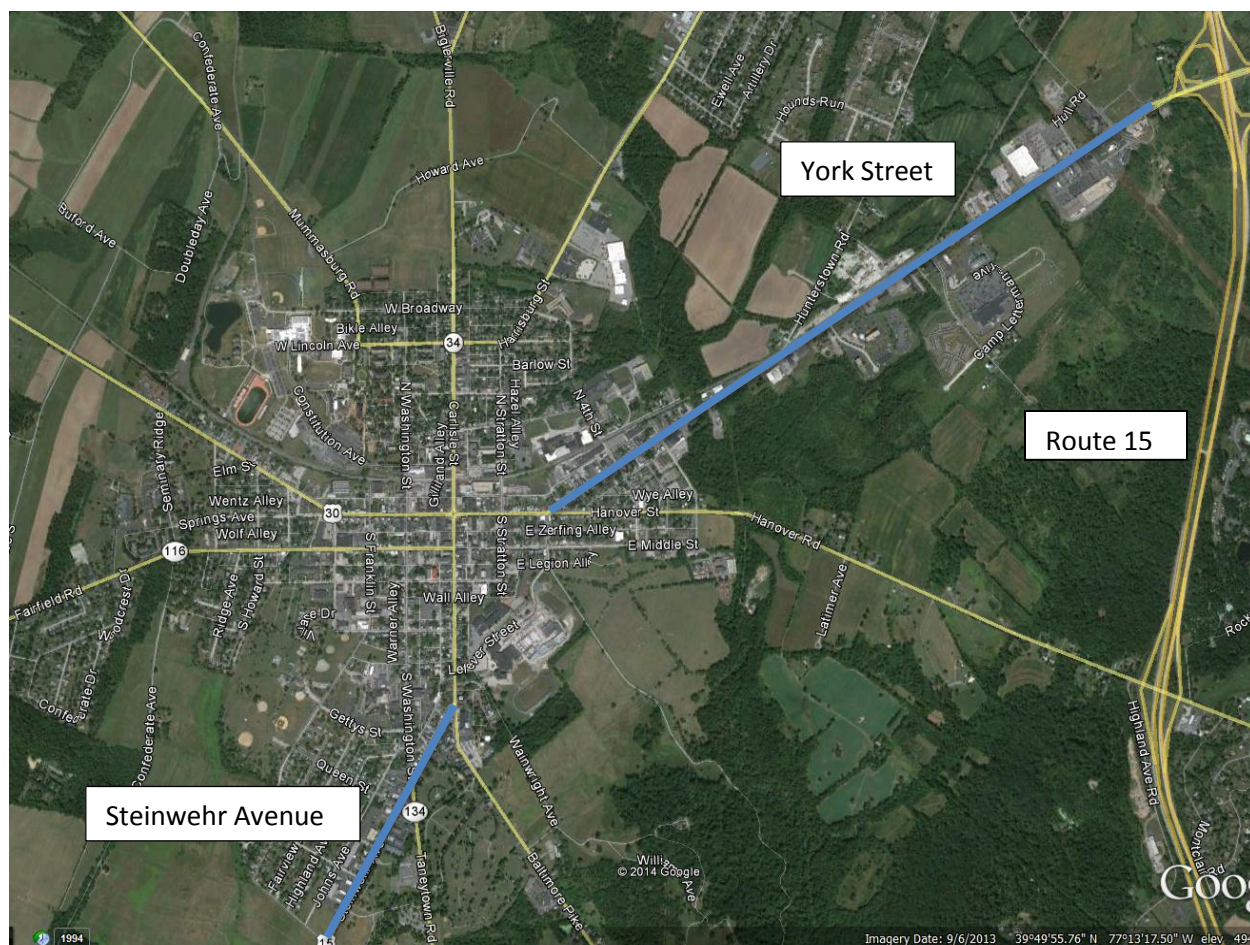


Figure 1. The two study sites, Steinwehr Avenue and York Street in Gettysburg, Pennsylvania.



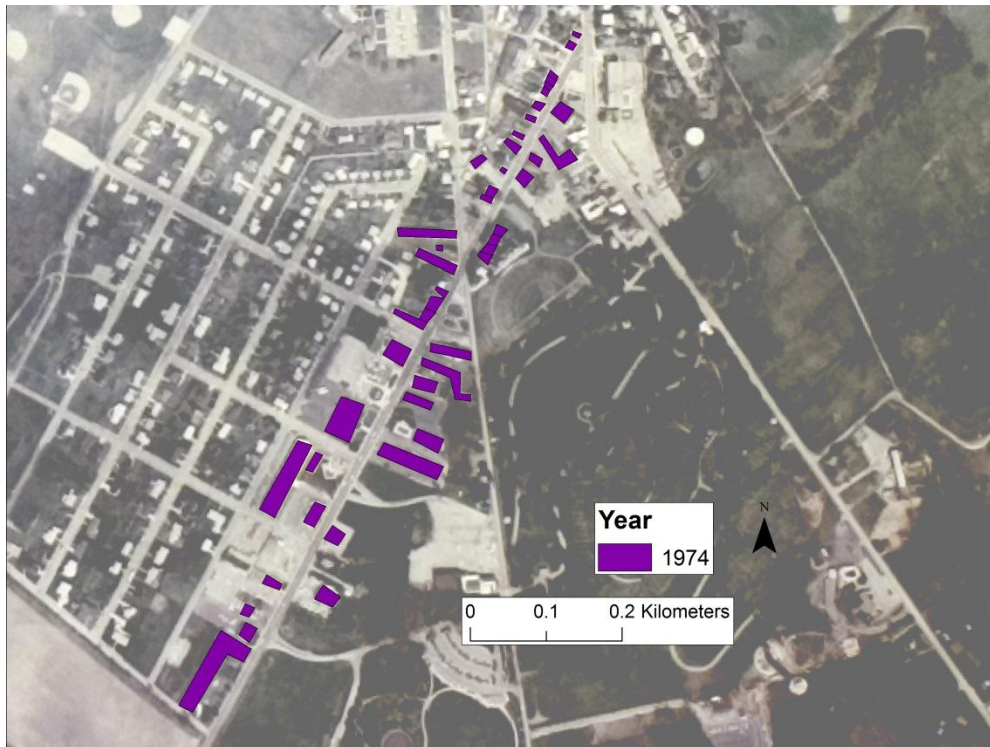


Figure 2. Buildings detected on Steinwehr Avenue, Gettysburg, Pennsylvania, in 1974.



Figure 3. Buildings detected on Steinwehr Avenue, Gettysburg, Pennsylvania, in 1974 and 1989.

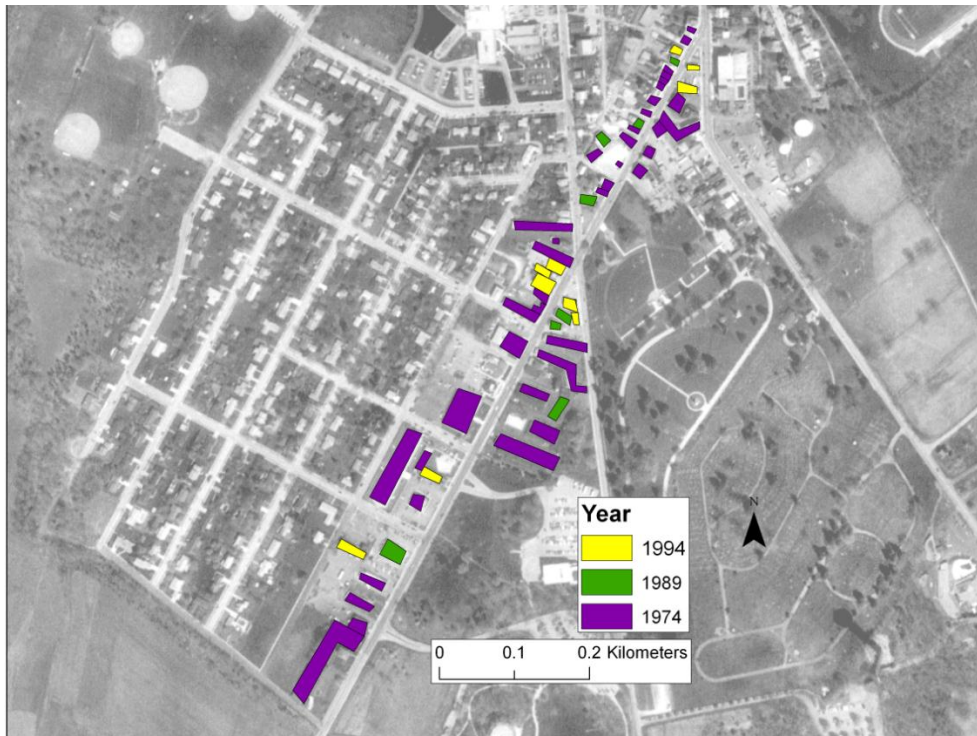


Figure 4. Buildings detected on Steinwehr Avenue, Gettysburg, Pennsylvania, in 1974, 1989, and 1994.



Figure 5. Buildings detected on Steinwehr Avenue, Gettysburg, Pennsylvania, in 1974, 1989, 1994, and 2003.



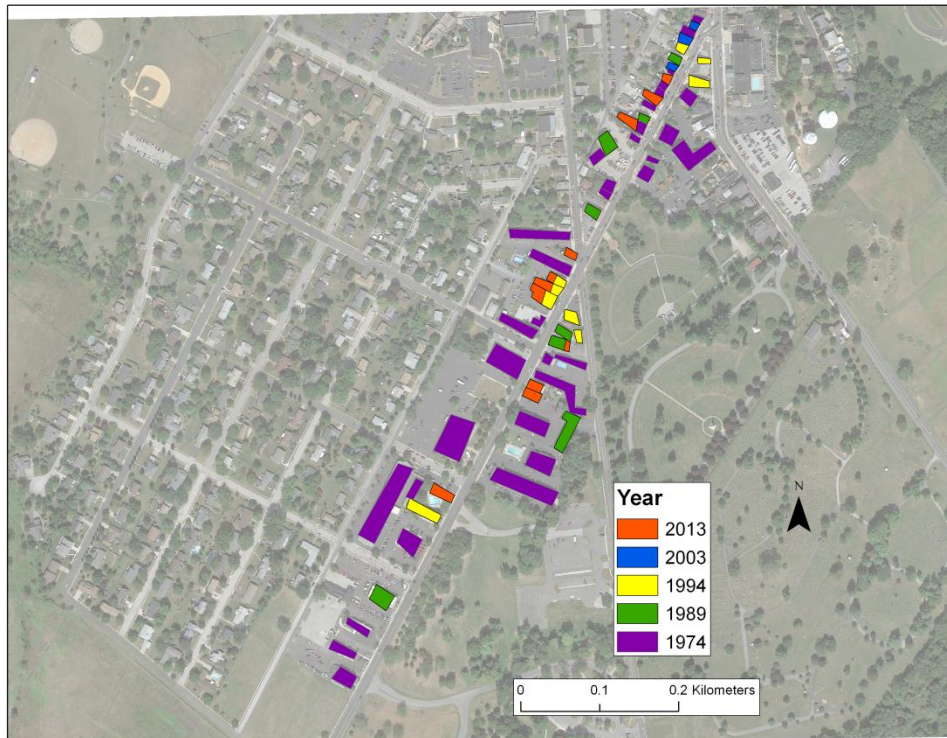


Figure 6. Buildings detected on Steinwehr Avenue, Gettysburg, Pennsylvania, in 1974, 1989, 1994, 2003, and 2013.



Figure 7. Buildings detected on York Street, Gettysburg, Pennsylvania, in 1971.



Figure 8. Buildings detected on York Street, Gettysburg, Pennsylvania, in 1971 and 1989.

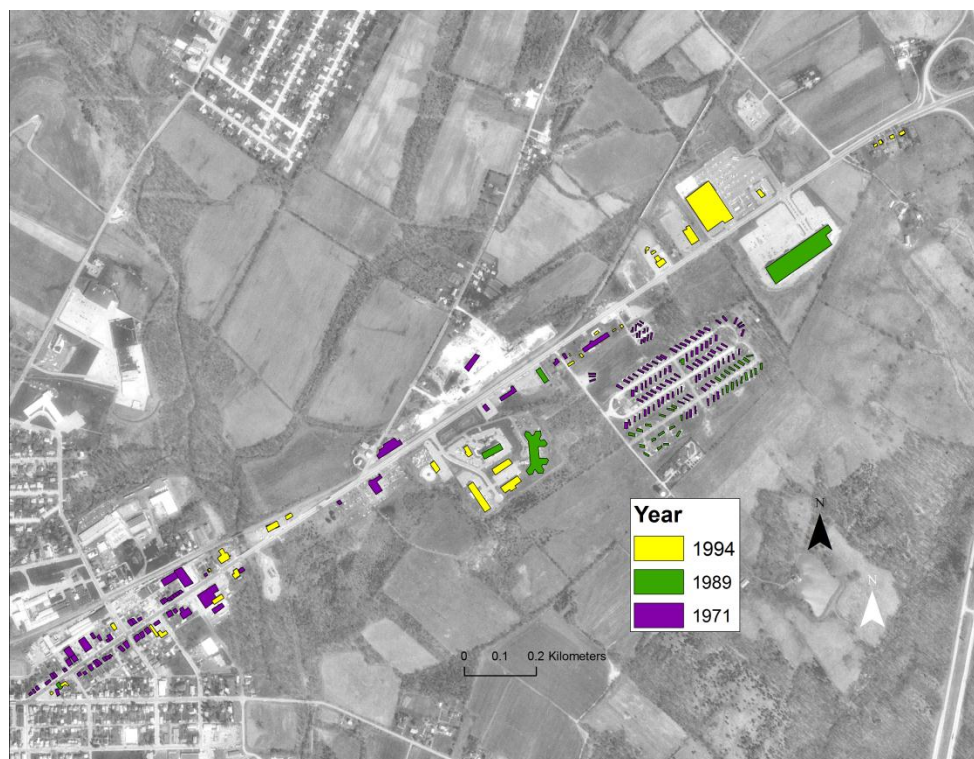


Figure 9. Buildings detected on York Street, Gettysburg, Pennsylvania, in 1971, 1989, and 1994.



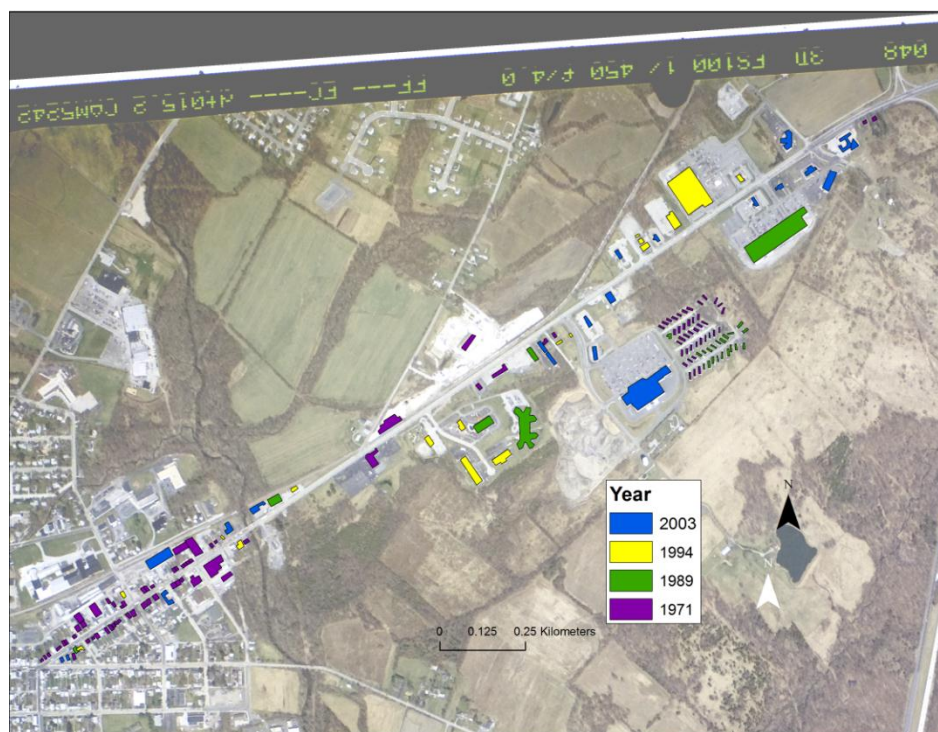


Figure 10. Buildings detected on York Street, Gettysburg, Pennsylvania, in 1971, 1989, 1994, and 2003.

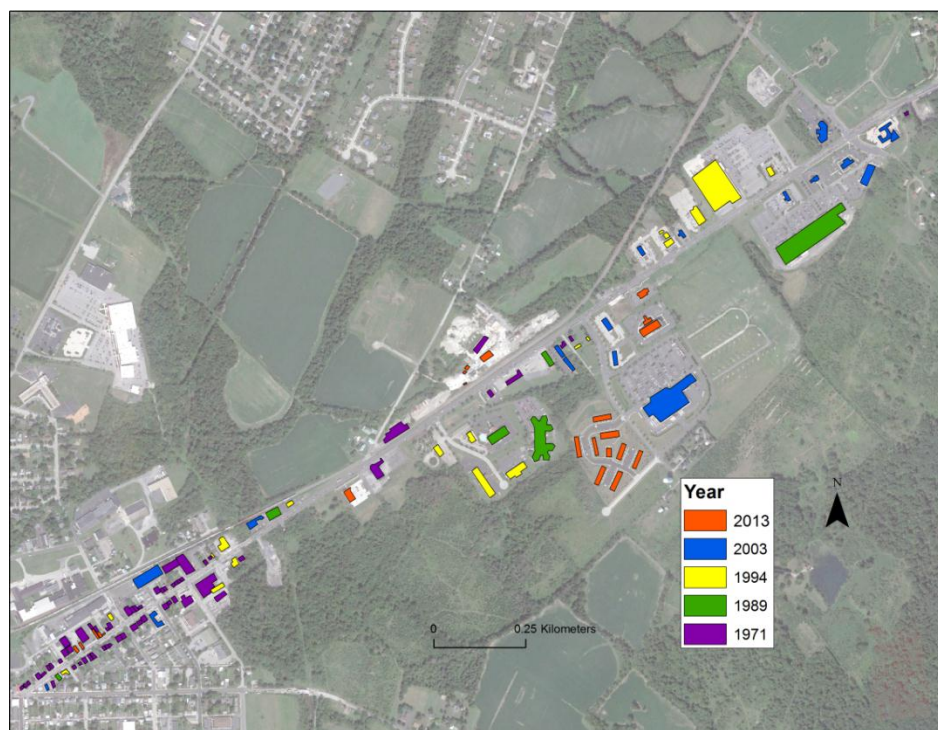


Figure 11. Buildings detected on York Street, Gettysburg, Pennsylvania, in 1971, 1989, 1994, 2003, and 2013.

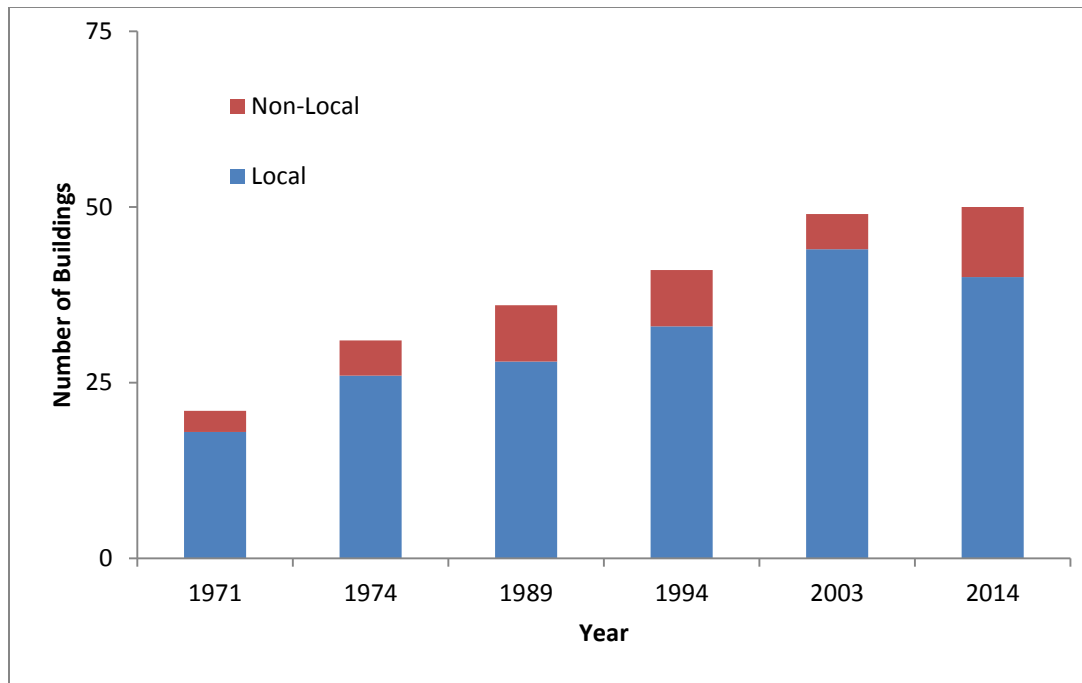


Figure 12. The number of businesses categorized as local and non-local on Steinwehr Avenue, Gettysburg, Pennsylvania.

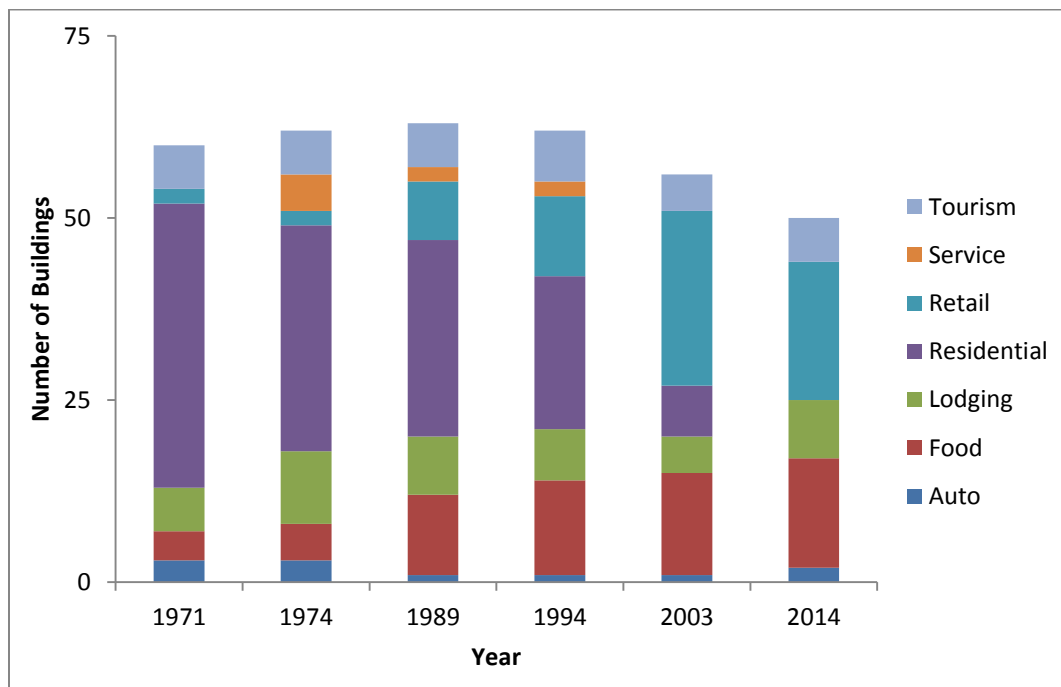


Figure 13. The number of buildings in each category for Steinwehr Avenue, Gettysburg, Pennsylvania.

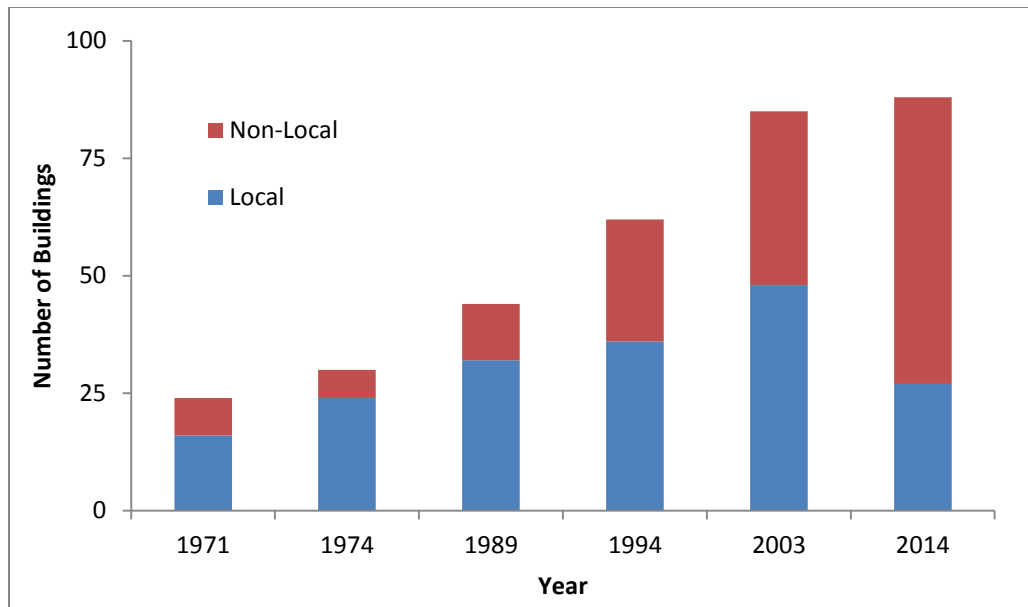


Figure 14. The number of businesses categorized as local and non-local on York Street, Gettysburg, Pennsylvania.

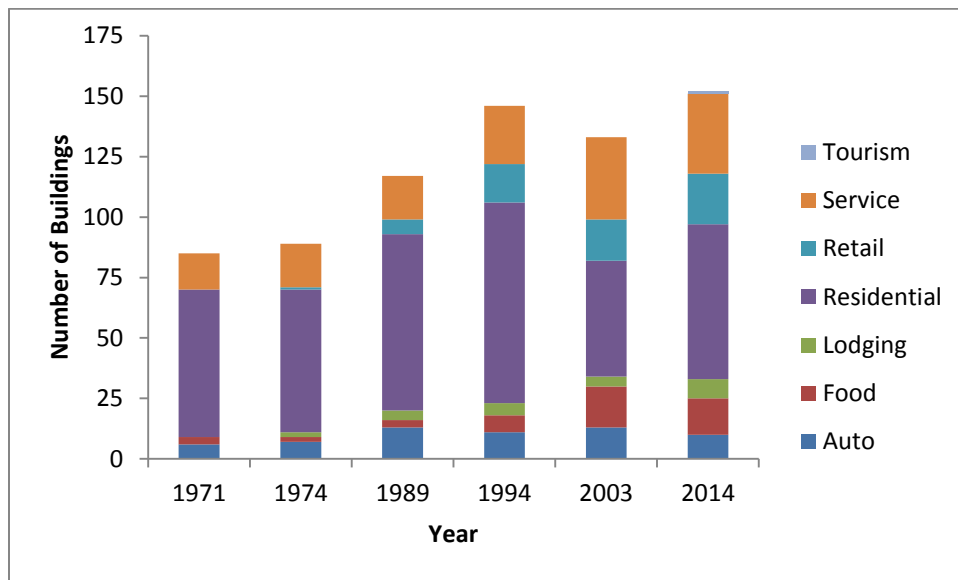


Figure 15. The number of buildings in each category for York Street, Gettysburg, Pennsylvania.

Table 1. Metadata for the areal imagery used for Steinwehr Avenue, Gettysburg, Pennsylvania.

Year	Agency	Coordinate	Data	Photo ID
1974	NASA- Johnson Space Center	39°51'11.00"N 77°16'46.12"W	4/29/1974	AR6271003100077
1989	USGS	39°51'02.84"N 77°15'55.33"W	4/17/1989	IVFLT00030082
1994	USGS	39.875N 77.25W	4/8/1994	03907715.NWS.65948
2003	Urban Area Photograph (Home Land Security)	39°50'42.20"N 77°16'13.89"W	4/3/2003	ARUPAMAP0120067
2013	Google Earth	39°50'27.46"N 77°14'34.49"W	9/6/2013	

Table 2. Metadata for the areal imagery used for York Street, Gettysburg, Pennsylvania.

Year	Agency	Coordinate	Data	Photo ID
1971	USGS	39°51'05.30"N 77°14'14.70"W	9/25/1971	adams_092571_ahc_4mm_81
1989	USGS	39°51'05.30"N 77°14'14.70"W	4/17/1989	IVFLT00030083
1994	USGS	39.875N 77.25W	4/8/1994	03907715.NWS.65948
2003	Urban Area Photograph (Home Land Security)	39°49'33.03"N 77°13'46.80"W	4/3/2003	UPAMAP0120069
2013	Google Earth	39°50'50.34"N 77°13'54.06"W	9/6/2013	

Table 3. The list of attributes of walkable cities and auto-centered cities using descriptions outlined by scholars including Jeff Speck, William Whyte, James Kunstler, and Folke Kihlstedt.

Attributes of Walkability	Steinwehr Avenue	York Street
Mixed building types	✓	
High density	✓	
Short blocks	✓	
Buildings close to street	✓	
Narrow roads	✓	
Narrow turning radii	✓	
Small parking lots	✓	
Traffic calming	✓	
Parking behind the building	✓	
Public transportation	✓	✓
Public benches	✓	
Presence of sidewalks	✓	✓
Pedestrian safety	✓	
Cyclist safety	✓	
Presence of trees	✓	
Street-oriented business association	✓	

## Works Cited

- Basker, E. (2007). The Cause and Consequences of Wal-Mart's Growth. *Journal of Economic Perspectives*.
- Bennett, G. (1999). *The Gettysburg Railroad Company and Lincoln Station*. Gettysburg, the Lincoln Railroad Station Restoration Project. Gettysburg, Pennsylvania.
- Dooley, K., Yan, T., Mohan, S., & Gopalakrishnan, M. (2009). Inventory Management and the Bullwhip Effect During the 2007-2009 Recession: Evidence From the Manufacturing Sector. *Journal of Supply Chain Management*.
- Garreau, J. (1991). *Edge City*. New York: Anchor Books.
- Gettysburg, the Borough Of. (2014). Code Ordinances. Retrieved from: [http://www.gettysburg-pa.gov/codes/code\\_ordinances.htm](http://www.gettysburg-pa.gov/codes/code_ordinances.htm).
- Gulati, R., Nohria, N., & Wohlgezogen, F. (2010). Roaring out of recession. *Harvard Business Review*, 88(3), 62-69.
- Howe, J., McMahon, E., and Propst L. (1997). *Balancing Nature and Commerce in Gateway Communities*. Washington, D.C.: Island Press.
- Jakle, J., Sculle, K., & Rogers, J.S. (1996) *The Road and American Culture*. Baltimore: The Johns Hopkins University Press.
- Jakle, J., & Sculle, K. (1999). *Fast Food: Roadside Restaurants in the Automobile Age*. Baltimore : The John Hopkins University Press.
- Jones, L.Y. (1980). *Great Expectations: America and the Baby Boom Generation*. Ballantine, N.Y.: Ballantine Books.
- Kihlstedt, F.T. (1980). The Automobile and the Transformation of the American House. *Michigan Quarterly Review*, 19 (4), 555-570.
- Kunstler, J.H. (1993). *The Geography of Nowhere*. New York: Touchstone.
- Lee, D. and Reeder, D. (2012, Spring/Summer). Mitigating Encroachment of Park Experiences: Sustainable Tourism. *Park Science*, 29 (1), 48-52.
- Lewyn, M. E. (2000, December). Suburban Sprawl: Not Just an Environmental Issue. *Marquette Law Review*.
- Li, S., Linn, J., & Spiller, E. (2011). Evaluating "Cash for Clunkers": Program Effects on Auto Sales, Jobs, and the Environment. *Resources for the Future Discussion Paper*, 10-39.

- Mateo-Babiano, I. and Ieda, H. (2005). Theoretical Discourse on Sustainable Space Design: Towards Creating and Sustaining Effective Sidewalks. *Business Strategy and the Environment*, 14 (1), 300-314.
- Moudon, A.V., Hess, P.M., Snyder, M.C., & Stanilov, K. (1981). Effects of Site Design of Pedestrian Travel in Mixed-Used, Medium-Density Environments. *Journal of the Transportation Research Board*, 48-55.
- Munneke, H., & Slawson, V. (1999). A Housing Price Model with Endogenous Externality Location: A Study of Mobile Home Parks. *Journal of Real Estate Finance and Economics*, 19(2), 113-131.
- (2009). *A Revitalization Plan for the "Heart of Gettysburg District"*. Gettysburg, Pa: Delta Development Group, Inc.; EDSA, Inc; HRG, Inc.
- Speck, J. (2012). *Walkable City*. New York: Farrar, Straus, and Giroux.
- Stobaugh, R., & Yergin, D. (1983). *Energy Future*. New York: Random House Vintage Books.
- Stynes, D.J., and Sun, Y. (2003). Economic Impacts of National Park Visitor Spending on Gateway Communities: Systemwide Estimates for 2001. *Department of Park, Recreation and Tourism Resources at Michigan State University*.
- Suarez, R. (1999). *The Old Neighborhood*. New York: Free Press.
- Tourism in Adams County, PA (2014). Retrieved from:  
<http://www.destinationgettysburg.com/media/facts.asp>
- U.S. Census Bureau (2012). Gettysburg (borough), Pennsylvania - Population 2012 Estimate. Retrieved from: <http://quickfacts.census.gov/qfd/states/42/4228960.html>
- Weeks, J. (2003). *Gettysburg: Memory, Market, and an American Shrine*. Princeton: Princeton University Press.
- Williams, H.A. (1952). *The Western Maryland Railway Story*. Baltimore, M.D.: The Western Maryland Railway Company.
- World Bank (2013). Motor Vehicles (per 1,000 people). Data retrieved 5 May 2014, from World DataBank: World Development Indicators database.