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To Polish or Demolish? : The Resurgence and Reimagining of American Rail

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To Polish or Demolish?

The Resurgence and Reimagining of American Rail
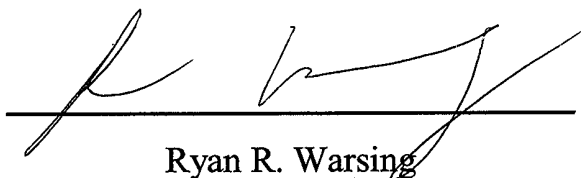
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Pittsburgh, Pennsylvania

A Thesis presented to the Undergraduate Faculty

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Bachelor of Arts

Government Department

The College of William and Mary

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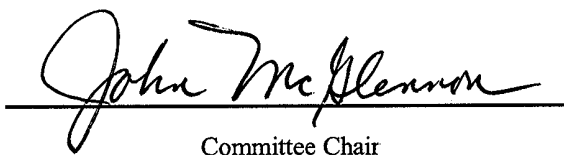
APPROVAL PAGE

This Thesis is submitted in partial fulfillment of the requirements

for the degree of Bachelor of Arts with Honors in Government

from the College of William and Mary in Virginia

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Approved by the Committee, April, 2014

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ABSTRACT

American railway stations stand tall among other buildings for reasons other than their physical size. These stations were born out of the monumental school that commanded buildings to serve higher purposes, 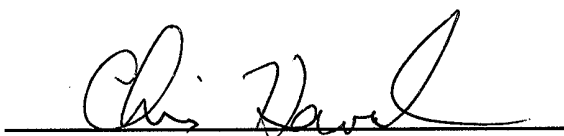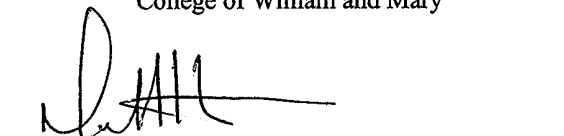to represent the ideals and aspirations of the people who built them. To accomplish this grand vision stations were built to artful extremes; bell towers, Doric columns, and waiting rooms the size of football fields were not uncommon features. Due to their elaborate forms, these stations have not weathered the tests of time as have smaller, simpler buildings. After a few tumultuous decades of reckless destruction, planners today have begun to embrace the power of urban renewal, and railway stations have been their laboratories. The following research concludes that stations are ideal specimens for modern-day reuse when they are unable to fulfill their original purposes. I attempt to uncover which environmental conditions are most hospitable to renewal, and find that collective action and institutional advocacy are the most important factors keeping these icons alive.

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ACKNOWLEDGEMENTS

This Thesis would not have been possible without the help of the assistance of Dr. John McGlennon, whose knowledge of all things metropolitan informed a great deal of my work. The advice of Dr. Christopher Howard and Prof. Matt Allar were also greatly appreciated, as were the revisions suggested by Isabel DoCampo, Scott Vierick, and Kelsey Schneider.

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ONCE UPON A TIME IN DETROIT
AN AMERICAN STATION IN DANGER

The first train pulled out of Michigan Central Station at 2:10 p.m. on December 26, 1913. The inauguration of Detroit's new terminal *had* been planned for January 4, but the old train depot caught fire and Michigan Central was drafted into early service. Despite all the initial disorder, the new station was met with great fanfare. One source called it "the most modern and magnificent station of any city in the world."[1] At a construction cost of over $16 million ($332 adjusted to today's inflation), it better have been. Upon its completion, Michigan Central was the tallest rail terminal on the planet - the end result of stacking more than 500 corporate offices for the Michigan Central Railroad (as well as its envious competitors) on top of the station's already cavernous 230-foot-long waiting room.[2] Downstairs was a restaurant, a telegram office, and a public bathhouse. There was a 28-foot tall arcade featuring a smoking lounge and reading room, a drugstore and cigar store, a newsstand and barbershop. Michigan Central was essentially a city all its own, but it wasn't built just to be *big*. As per the standards of monumental architecture, Detroit's new railway station was constructed to be a symbol – an imposing, intricately detailed tribute to a people on the rise.

Looking at Michigan Central today, this high purpose seems to have been forgotten. After dwindling streams of passengers forced the station to close its doors in 1988, the now abandoned train house has attracted all forms of vandalism and vagrancy. Developers have taken swings at the old building on a revolving-door basis, each advocating a totally different, even

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[1]Hodges, Michael H. *Michigan's Historic Railroad Stations*. Detroit: Wayne State UP, 2012: p. 47. Print.
[2] Austin, Dan. "Michigan Central Station." *Historic Detroit*. Historic Detroit. Web. 30 Nov. 2013.

more disappointing solution than the last. Some say Michigan Central ought to be turned into a headquarters for the Detroit Police.[3] Some say it should be a casino.[4] Some want it to be a museum.[5] Some maintain that it can be restored to its former glory as a transit hub, connecting the upper Midwest to a resurgent United States rail network.[6] These proposals might garner enthusiasm on paper, but in their implementation have all come up short of their promised rejuvenation. All the while Michigan Central has sunk deeper into development hell. By 2009 things had gotten so bad that the City Council voted to request federal stimulus funding for the building's demolition – funding that thankfully was never delivered.[7] How did a train station once compared to Buckingham Palace become such a pariah? How has nothing been done to save it?

The problem partly stems from the very symbolism Michigan Central set out to attain. In the cruelest kind of irony, Michigan Central has come to embody a Detroit not on the rise, but in decay. A recent report out of Wayne State University paints this grisly picture thusly:

> "The closure of Michigan Central Station followed decades of neglect, and the building has since been pistol-whipped and stripped of most of its interior ornamentation by vandals – in the main young suburban boys out on a lark. If Grand Central is as good a symbol as any of New York's rebirth, then the Michigan Central Station stands as a portent symbol for everything that's gone wrong win auto-obsessed Detroit."[8]

The building is today a source of great shame to many Detroiters who would prefer not to think that better times have passed, who only see in Michigan Central lofty dreams that were never

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[3] Austin, Dan. "Hope Must Outweigh Odds for Saving Detroit's Michigan Central Station." *Detroit Free Press*. The Gannett Company, 26 Dec. 2013. Web. 20 Mar. 2014.
[4] Austin, "Hope Must Outweigh Odds for Saving Detroit's Michigan Central Station"
[5] Austin, "Michigan Central Station"
[6] Zoellner, Tom. "Imagine What Michigan Central Station Could Be with High Speed Rail." *Detroit Free Press*. The Gannett Company, 26 Dec. 2013. Web. 19 Mar. 2014.
[7] Saulny, Susan. "Seeking a Future for a Symbol of a Grander Past." *The New York Times*. The New York Times, 05 Mar. 2010. Web. 09 Apr. 2014.
[8] Hodges, p. 53

realized. To these people, the station needs to go. In a strange twist of fate, however, Michigan

Central's dilapidated condition has become its primary draw – its strongest lifeline in a city

slowly pushing it off the brink. More and more camera-laden young people have made journeys

to "Detroit's most magnificent ruin" to witness the carnage themselves.[9] Michigan Central has

attained a sizable national following of people who view the building as a sort of tragic hero,

helplessly flawed yet still deserving of our pity – even our respect.

Michigan Central is not alone. Around the country, many of America's most storied

railway stations have either been destroyed or sit vacant, exposed to the elements and subject to

further decay. This neglect should be unacceptable to city planners and city dwellers alike. Such

blight, as it is commonly labeled, brings down entire communities and squanders what could

otherwise be a useful public space. Myriad examples over the past thirty years have proven that

train stations can still be integral urban places full centuries after they were first constructed.

These stations may look very different today than they once did, and they may serve entirely

different purposes than those originally intended, but through such transformations these

buildings have taken on new life and become inspiring once again. This is a sign of great hope

for Michigan Central. Though so many stations have prematurely fallen to the wrecking ball,

those that remain embody the inventive (and indeed, re-inventive) American spirit, demonstrating

how restoration can yield great results when people dare to try.

◊

My task in the following pages is to discover what makes a station most attractive to

renewal, as well as what factors compel stations to slouch into further decay. This study focuses

mainly on stations inspired by the monumental school, which was most influential during the late

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[9] Hodges, p. 52
Quote from Sharoff, Robert, and William Zbaren. *American City: Detroit Architecture, 1845-2005*. Detroit, MI: Wayne State University Press, 2005. Print.

19th and early 20th Centuries. These stations are all generally referred to as 'historic,' and as such are managed by groups like the National Register of Historic Places along with the interwoven bureaucracies that handle day-to-day administration. How do these tangled jurisdictional webs react to the different strains placed upon them? Under pressure from protective entities like the NRHP and national trends increasingly favorable to train travel, how will urban leaders incorporate old train stations into our modern transportation landscape? The answer may lie in how these buildings fell into disuse in the first place. History repeats itself, as the study ahead well shows.

Chapter Two:

LITERATURE REVIEW

Over the past thirty years, urban renewal has become a field of great study. The relative newness of the discipline means there aren't many sources to draw on for testable theory. Writing in 1966, Doxiadis asserted that "because of the lack of specific goals, urban renewal as a whole has not developed a scientific methodology for the formulation of policies and program."[10] Though researchers have tried to formulate this empirical basis in years since, there has been little movement away from the narrow study of urban decay and rehabilitation. Baer (2007) argues the academic community has been "limping along" because planners refuse to seriously consider preservation and renewal in their long-term city management schemes.[11] To Baer, these strategies have become temporary bandages to individual problems rather than widely available solutions to cities in need. Until cities become more flexible and uphold preservation and renewal as standard practices, it will be difficult to filter generalizable data from the cases at hand.

My research is primarily motivated by the scholarship of Luca Bertolini, who asserts in his book *Cities on Rails* that railway stations are unique in their service as both centers of public transport and venues for public exchange.[12] Carr et al. define public spaces as "open, publicly accessible places where people go for group or individual activities."[13] Using this definition we can see how train stations would be, in themselves, impromptu public forums. Richards and

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[10] Doxiadēs, Kōnstantinos Apostolou. *Urban Renewal and the Future of the American City*. Chicago: Public Administration Service, 1966: p. 11. Print.
[11] Baer, William C. "When Old Buildings Ripen for Historic Preservation: A Predictive Approach to Planning." *Journal of the American Planning Association* 61.1 (1995): 82-94. Print.
[12] Bertolini, Luca, and Tejo Spit. *Cities on Rails: The Redevelopment of Railway Station Areas*. London: E & FN Spon, 1998. Print.
[13] Carr, Stephen, Mark Francis, Leanne Rivlin, and Andrew Stone. *Public Space*. Cambridge: Cambridge UP, 1992. Print.

MacKenzie concur, and elevate the railway station to a place of social sanctity.[14] Due to its

central location in historical American city planning, as well as its nature as a city-to-city

crossroads, the railroad station functions very much like the public square of old. The decline of

the American railroad station has accompanied a decline in American social culture; Americans

are more superficially connected when train stations don't exist to facilitate public exchange.

Richards and Mackenzie claim that railroad stations have unique merit in comparison to other

buildings, and therefore ought to be maintained whenever and wherever possible – a point of

view shared by the majority of researchers in the field.

Carr et al. also emphasize the market-expanding nature of transportation amenities, of

which railway stations are a part. This means that even when railroad stations are not publicly

desirable in themselves, the services they provide when ferrying people into and out of urban

centers expands the reach of nearby public places and fosters a greater sense of aggregate shared

space.[15] This is of course dependent on stations' success as transit nodes; maintaining a regular

stream of rail passengers is a train station's highest priority, and its success as a public space

relies on there being a public readily available in the first place.

We can see from an assortment of statistics how railway ridership declined following

World War II, a trend which has only recently begun to reverse. Over these fifty-odd years of

waning demand, private railway companies (and later Amtrak) sought to revitalize the country's

network of stations through a variety of means – including the demolition of many old railway

facilities. Churchill argues the basis of this decline lies in demographic shifts.[16] At the end of

WWII, cities saw unprecedented drop-offs in population as urbanites fled to growing suburbs.

Churchill attributes this movement to two factors: the dispersion of industry and the availability

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[14] Richards, Jeffrey, and John M. MacKenzie. *The Railway Station: A Social History*. Oxford: Oxford
University Press, 1986: p. 5. Print.
[15] Carr et. al., p. 72
[16] Churchill, Henry S. *The City Is the People*. New York: Reynal & Hitchcock, 1945. Print.

of personal transport; people followed suburbanizing industry, and thanks to their new automobiles were able to do so rather easily.[17] In the population void that followed, cities were less reliant on trains for transport, rendering train stations obsolete. In the past decade, however, a number of influences have allowed Amtrak's annual passenger service to increase 44 percent, indicating a new market for trains is on the way.[18] Cities like Raleigh and Miami are currently in the midst of building new train stations after having once cast terminals by the wayside. Such new reinvestment should be applauded, but it remains to be seen whether cities will reincorporate *old* train stations into their revised railroad plans.

I apply the works of Kenneth Kolson to see why so many train stations have deteriorated under less-than-ideal conditions. His book *Big Plans* surveys developments from the Fourth Millennium, B.C. to the construction of London's Millennium Dome in order to analyze the effects or 'planning Big.'[19] Kolson looks at bigness not as a measure of size alone, but also of boldness, of ambition, and finds that these ingredients do not always make for the most successful public structures. "Big Plans have a way of becoming ends in themselves," Kolson writes, "and not infrequently, they contain the seeds of their own destruction."[20] In other words, the bigger they are, the harder they fall. America's railroad stations are the most visible example of Big Plans gone awry. The literal bigness of these buildings has given them unique public stature, but has also served to undermine their long-term economic position. Though the size, age, history, and cultural embeddedness of these stations have in most cases amounted to a slight handicap in the face of impending obsolescence, our sentimental attraction to these buildings is so often dwarfed by what we perceive as the rational unfathomability of keeping them up.

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[17] Churchill, p. 150
[18] Vantuono, William. "For Amtrak, another Record-Ridership Year." *Railway Age*. Simmons-Boardman Publishing Inc., 14 Oct. 2013. Web. 30 Nov. 2013.
"Amtrak: America's Railroad." *Amtrak*. National Railroad Passenger Corporation. Web. 7 Dec. 2013.
[19] Kolson, Kenneth L. *Big Plans: The Allure and Folly of Urban Design*. Baltimore: Johns Hopkins UP, 2001: p. 12. Print.
[20] Kolson, p. 5

Kolson and Jane Jacobs write that planners ought to obey the 'if it ain't broke, don't fix it' maxim that has lead such places as Trajan's Forum to become successful public places over the course of many undisturbed years.[21] Jacobs in her own right argues for the expansion of urban renewal strategies, though she casts dispersion on the term 'blight,' which she points out is relative to the eye of the beholder.[22] As one of the pioneering advocates of mixed-use planning, however, Jacobs notes how the most publicly successful and gratifying urban designs involve old structures taking on new activities. She vigorously defends the buildings' right to be old, claiming that every successful neighborhood needs buildings of various ages in order to capture all facets of urban activity.[23] Old buildings help stave off the homogeneity that makes new places become boring fast. They inspire a diversity of uses which attract diverse crowds of people, ensuring that city streets are used day and night – a key pillar of Jacobs' ideal metropolis.[24] Old buildings also become incubators for new enterprises, which grow larger and more successful until they can afford to pay rents in newer neighborhoods and move away.[25] This vacancy is only temporary, and should not be considered a failure, argues Jacobs. Rather, it is a part of a natural, healthy cycle.

Jacobs and Kolson both have harsh words for history's most famous Big Planners, particularly those at the forefront of the City Beautiful, a school which inspired the construction of so many monumental buildings. Many of America's most desperate railway stations are the unfortunate descendants of famed Chicago architect Daniel Burnham, chief of construction for Chicago's 1893 World Columbian Exposition and coiner of the phrase "make no little plans." Aside from inspiring the title of Kolson's book, Burnham's mantra inspired a generation of zealous, big-thinking architects from America and around the world.[26] Designing buildings in

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[21] Kolson, p. 24
[22] Jacobs, p. 234
[23] Jacobs, p. 187
[24] Jacobs, p. 152
[25] Jacobs, p. 195
[26] Wilson, William H. *The City Beautiful Movement*. Baltimore: Johns Hopkins UP, 1989. Print.

line with monumental principles has proven to be a game of high-risk high reward; while many of these designs have been quite successful, others have failed spectacularly. These fatally flawed buildings often live far shorter lives than their designers intended, succumbing to demolition or painful overhauls before paint has had time to dry.

In more recent years, the governing land use paradigm has become more open to reuse and less so to wonton demolition. Though Baer is quick to point out that this ideological shift has a long way to go, and that today's embrace of reuse is for the most part lip service, stations today are far less likely to be destroyed than those in eras past.[27] This newfound sanctuary is due mostly to two things, the first of which is the National Register of Historic Places. Since 1970 the NRHP has sought the protection of historic structures across the country.[28] After the Register was founded, private railway companies scrambled to demolish what remaining properties they could before the federal government was able to intervene (See Figure 3). The 1970s saw the most vicious battles between these competing interests; those on one side vouched for the preservation of old structures, and those on the other advocated demolition as a means of securing badly needed economic growth. Now that time has progressed and the dust has cleared, the stations left standing are far less likely to be destroyed than their predecessors, though they are certainly not immune to all danger.

The second major development impacting railroad stations was the establishment of the National Railroad Passenger Corporation, or Amtrak is it is more colloquially known today. After being signed into existence with the Rail Service Passenger Act of 1970 (a very eventful year in the railroading industry), Amtrak solicited the county's private railway providers to join its ranks, relieving them of their obligation to provide intercity rail transit.[29] Upon doing so these

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[27] Baer, p. 84
[28] "National Register of Historic Places Program: About Us." *National Parks Service*. United States Department of the Interior, 13 June 2011. Web. 30 Nov. 2013.
[29] "Passenger Rail." *FRA*. Federal Railroad Administration. Web. 09 Apr. 2014.

private companies were given common stock options in the newly formed Corporation, and their services became nationalized.[30] Because Amtrak could rely on taxpayer money as well as funds from other sources, there was less incentive for the railways' new owners to cut all losses and frantically dump expensive infrastructure. The mission of Amtrak wasn't entirely motivated by profit, but also the continued provision of railway services to people across the United States. This goal would naturally be difficult to accomplish via the demolition of America's train stations. The following research thusly shows that, after the foundation of Amtrak, stations were less likely to find themselves suddenly stripped of their transport services – a constant worry in the pre-Amtrak era.

Amtrak and the NRHP have waged a two-pronged assault in defense of American rail, with the former fighting to retain railway services and the latter blocking attempts to destroy railway buildings. As a result, America's railway stations are more secure than they once were. The demolition of Michigan Central nearly overturned two decades of preservation progress, but Detroit's inability to secure demolition funding shows how difficult it is for stations to be destroyed in the Preservation Age.[31] Some argue this protection de-incentivizes innovation and necessary change, allowing stations to coast indefinitely on life support while getting in the way of new construction. Randall Mason, for instance, says the academic community's definition of 'significant' buildings is too broad, too capricious, and too short-sighted – if everything is significant, nothing is.[32] With such ill-placed sanctuary, Mason argues rehabilitated structures often fail to overcome the problems faced by their predecessors and are no better off for the on-paper safety they receive. Despite these warnings, contemporary norms dictate we preserve

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[30] H.R. 17849, 91st Cong. (1970) (enacted). Print.
[31] Saulny, p. 1
[32] Mason, Randall. Fixing Historic Preservation: A Constructive Critique of" Significance." Places (Cambridge, Mass.) 16.1 2003: 64. Published by the MIT Press for the College of Environmental Design, University of California, Berkeley. 01 Apr 2014.

buildings that are deemed significant by somebody somewhere, though how we accomplish this

goal is often very unclear.

Chapter Three:

TRAIN STATIONS: A TAXONOMY

While airports and seaports operate in places removed from everyday life, train stations function best when built in the middle of urban places.[33] City dwellers interact with these stations every day even if they have no intention of catching a train. For this reason, Luca Bertolini identifies train stations not only as transit nodes, but also as places in themselves.[34] This dual nature sets railway stations apart from other types of port; nobody feeds the birds outside JFK International Airport, though they may in front of Grand Central Station. A place, or more specifically a *public* place, is in the simplest terms marked by people who go there *just for the sake of going there.* Michael Brill notes that public environments are places which affect the common good, are open to the general population, and provide a means of socialization otherwise unobtainable through friends and family. [35]   In other words, ideal public spaces are welcoming to all and facilitate a public social consciousness. These places are desirable for their own sake, and do not exist solely for the purveyance of a good or service (though they may well provide one). Successful railway stations, therefore, must do more than just pass rail passengers further down the line – they must also shelter and foster the general public discourse.

Cultivating the public's affection is not a simple task. Kolson relates how today's most beloved public places are the result of centuries-long development, in which original designs were adjusted and augmented to fit the needs of different peoples, places, and times. [36] 'Big Box'

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[33] Bertolini, p. 16
[34] Bertolini, p. 9
[35] Brill, Michael. "Transformation, nostalgia, and illusion in public life and public place." *Public places and spaces*. Springer US, 1989. 7-29.
[36] Kolson, p. 24-26

developments have a shorter shelf life than their more gradually constructed counterparts because buildings have to *earn* respect – they cannot just claim it. Though architects may be tempted to design without limits and airlift large structures into unsuspecting communities, they must know how quickly even the grandest designs will fail when they have little substance beyond their impressive appearances. The word of a single designer can do nothing to give greater importance to mere stone and iron, and while a wide assortment of railway stations claim to be the next 'wonder of the world,' it is the *public* who decides whether or not this title is deserved.

Looking at the site of Daniel Burnham's White City we see how unforgiving the public can be. Of the over two hundred buildings constructed for the Columbian Expo, only one stands today.[37] The reason for this is clear: the White City was just too far removed from the lives of everyday people. Indeed, when designers make buildings fit for Gods they often forget to factor human beings into the equation. After the Expo packed up and left, Chicagoans saw little reason to make pilgrimages to Burnham's Lake Michigan Mecca, which, though beautiful, was of little practical use.[38] In the words of Jane Jacobs, Burnham's White City was nothing but a collection of "pastries on a tray –" scrumptious to look at, not to eat. [39] Burnham's destructive recipe has nevertheless been recreated all around the globe, and to belabor the metaphor, those who gorged themselves are still getting over the stomachache. What these imitators failed to realize was that the White City was all show and little substance. In anticipation of this diminishing public favor, Burnham's City was made of temporary buildings that could easily be deconstructed – a luxury not afforded to spaces built permanently in the monumental style.[40]

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[37] McNamara, Chris. "Remnants of the White City." *Chicago Tribune*. Chicago Tribune, 02 July 2004. Web. 09 Apr. 2014.
[38] Kolson, p. 61-62
[39] Jacobs, p. 61-74.
[40] Lepeska, Davie. "The Rise of the Temporary City." *Atlantic Cities*. Atlantic Monthly Group, 1 May 2012. Web. 09 Apr. 2014.

America's railway boom coincided with Burnham's rise to prominence and the diffusion of monumental architecture. Burnham himself designed many railway stations across the United States, and those that didn't bear his name were still influenced by his spokesmanship of the monumental school. American train stations were big, brash, and beautiful – a swagger that made them famous in their past lives and infamous in their present states. Guided by the monumental vision, as well as the perceived invulnerability of the railway system, these stations were often built to ludicrously large proportions that hindered regular upkeep and dramatically increased the costs of unexpected repairs. These innate flaws were only intensified by a steadily shrinking pool of rail passengers who were flocking to other modes of transportation. Turn-of-the-century rail barons and urban planners could hardly have foreseen such a dramatic shift, and as such designed their facilities based on what the market *was* rather than what it might someday *be*. After the Second World War, railway companies began leveling their costly, aging stations left and right. The bubble had burst, and stations left standing became mausoleums of industrial hubris – cruel jokes in a world that no longer needed them.

Stations as Transit Nodes

Railway aficionados often attribute the postwar decline in American rail to two principal culprits: the airplane and the automobile. Whereas before the war people could only get across the country by train, thanks to wartime developments in aeronautics commercial airlines became a viable alternative by the 1950s and 1960s. At the same time the 'Jet Age' was starting to take off, American auto manufacturers were churning out an ever-increasing amount of cars and trucks. The newly built Interstate Highway System served to bolster cars' utility and intensify the already serious exodus away from the tight-knit city centers railways inherently relied on. While airplanes gave Americans access to faster inter-coastal and intercontinental travel, cars gave them the freedom to make jaunts to the corner grocery store or to visit relatives in a nearby town

whenever they wanted. Trains, which have never been as fast as the airplane or as flexible as the car, saw their market gnawed away from both ends. [41] For roughly half a century commuter rail was relegated an awkward, intermediate position that served no demographic particularly well, and was forced to survive as a quaint, if not tedious form of novelty transportation.

Today, however, trains have begun to reassert their position in America's transportation mix. Part of this resurgence is due to the fading veneer of airline travel. Flying by plane today generally requires frequent, out-of-the-way layovers and lengthy security checks that undermine airlines' position as the fastest, most direct forms of transportation available. Furthermore, airline companies have repeatedly gone the way of yesterday's rail empires, jacking up fees and merging with one another in order to stave off fiscal insolvency.[42] Today, a passenger jet is hardly more glamorous than a Greyhound bus, and when people hear Sinatra beckon to 'Come Fly with Me,' for the first time in a long time they actually have to think about it. In this truly remarkable reversal of fortune, trains have usurped planes as the trendiest forms of public transportation. On a technological level, developments in magnetic levitation, advanced aerodynamics, and lightweight materials have allowed trains to travel in excess of three-hundred miles per hour – speeds still lower than those of airplanes, but blistering nonetheless. [43] These faster speeds along with trains' inherent access to city centers and lack of toxic emissions have made reinvesting in railways a very talked-about policy option amongst urban planners the world over.

A similar dynamic seems to be unfolding between the train and automobile. Often depicted as rail travel's arch-nemeses, the automobile without a doubt remains the most popular form of transport in the United States. But if a recent study by *Quartz* is to be believed, cars will

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[41] Bertolini, p. 21
[42] Quaraishi, Jen. "Six Ways Air Travel Is Getting Worse." *Mother Jones*. Mother Jones and the Foundation for National Progress, 29 June 2010. Web. 09 Apr. 2014.
Martin December 9, Hugo. "American Airlines-US Airways Merger Becomes Official." *Los Angeles Times*. Los Angeles Times, 09 Dec. 2013. Web. 09 Apr. 2014
[43] Davies, Alex. "11 Incredibly Fast Trains That Leave America in the Dust." *Business Insider*. Business Insider, Inc., 26 Nov. 2012. Web. 06 Feb. 2014.

not enjoy this dominance forever.[44] The rising cost of fuel and insurance, stagnant wages, and

increasing amounts of urban congestion have compelled commuters in many advanced economies

to reject the automobile for other modes of public transportation. The United States, for example,

may have achieved 'Peak Car' back in 2007, and will continue to see a drop-off in the demand for

new cars as time goes on. These results are no doubt influenced by the global recession which

occurred in 2008, and therefore should be taken lightly, but as with the airplane automobiles are

no longer the aspirational toys they once were. Cars today are seen not just as convenient means

of go-anywhere travel, but also as environmental polluters and the lifeblood of bland, sprawling

Suburbia.[45] As with airplanes, the shift away from cars is not just the product of economics, but

also the result of shifting social and political norms.

Through it all, trains have become 'cool' once again. Based on recent findings from *The

Harris Poll,* nearly two thirds of all Americans want more federal funding for high-speed rail.[46]

While this enthusiasm tends to cool when such projects actually break ground, state and local

governments are forging ahead with HSR all around the country – most notably in California and

Florida.[47] The California High Speed Rail Authority, for example, is laying the groundwork for

eight-hundred miles of new track stretching from Sacramento to San Diego – the first such

project of its kind officially under construction in the United States.[48] Florida, meanwhile, has

proposed several realistic plans for HSR, but when offered federal funds for the system's

construction, conservative lawmakers rejected them.[49] Even so, new stations like the Miami

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[44] Fernholz, Tim. "Is the Threat of "Peak Car" Turning Makers of Cars into "Enablers of Mobility?"" *Quartz.* 17 Jan. 2014. Web. 07 Feb. 2014.

[45] Kolson, p. 11

[46] Schultz, Linda. "More Than a Third of Americans Aware Of High Speed Rail Projects in Their State." *Harris Interactive.* Harris Interactive, 24 Feb. 2011. Web. 9 Apr. 2014.

[47] Vartabedian, Ralph. "52% Want Bullet Train Stopped, Poll Finds." *Los Angeles Times.* Los Angeles Times, 28 Sept. 2013. Web. 09 Apr. 2014.

[48] "Miami Central Station." *Miami Intermodal Center.* Florida Department of Transportation. Web. 09 Apr. 2014.

[49] "Crist Returns to the High-speed Fray." *The Economist.* The Economist Newspaper, 07 Nov. 2013. Web. 09 Apr. 2014.

Intermodal Center are being built to accommodate bullet trains even though Florida's HSR system has not yet been approved; lawmakers await the results of California's grand experiment before committing their own state funds.[50] Slow as this investment may be, people around the country are intrigued by the prospect of using trains once again. Though they maintain a healthy skepticism about how HSR may actually be implemented, people are warming to the notion that fast, convenient, and clean intercity bullet trains are only a matter of time in coming.

While the government drags its feet, private railway companies – the actual owners of U.S. track – have allocated greater funds to rail lines' improvement. Between 2000 and 2009 these companies spent an aggregate 17 percent of their income on capital investment – over five times the average investment of other manufacturers – to prepare their tracks for future demand.[51] While trains may never regain the monopoly they once held over intercity transportation, recent developments indicate trains, planes, and automobiles are finding their way into a state of mutual equilibrium. This would seem to spell brighter skies for the country's old railway stations which after so many years of lying dormant may finally have reason for existing once again. These antiquated stations are theoretically well-equipped to handle new traffic because of their central locations and their existing (if dilapidated) track, but until dollars start flowing toward railway reinvestment en masse this theory will not be put to observable practice. Now that transportation trends seem to favor the railways, however, we can finally consider the possibility of reintegrating old train stations into the greater rail system.

Stations and the Public

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[50] California. California High Speed Rail Authority. *Connecting California*. California High Speed Railroad Authority, 2014. Web. 9 Apr. 2014.
[51] Mullich, Joe. "The Resurgence of Rail." *The Wall Street Journal*. Dow Jones & Company. Web. 07 Feb. 2014.

Though the size of these stations has played a large role in their decline, there is still a silver lining reflected in stations' enormity – the larger the building, the greater the public's fascination with it. For example, before it was destroyed in the September 11th attacks, New York's World Trade Center was met with mixed public reception. Architecture critic Paul Goldberger wrote that the Center was "so utterly banal as to be unworthy of the headquarters of a bank in Omaha."[52]   Banal though they were, the monolithic towers were still featured prominently on postcards, in movies, and through the performance of public stunts; in 1974 French high-wire artist Philippe Petit made headlines by walking a tightrope strung between the newly constructed towers. Petit describes his personal feelings toward the buildings as a sort of friendship:

> "I didn't find them beautiful and interesting at first sight, but as I [got] to know them, as I found out that to build those two [monoliths] you had to [have] a group of insane [designers, architects, structural engineers, and builders – hundreds of them – it] became something to love. I love their strength and their arrogance, somehow. […] Somehow anything that is giant and manmade strikes me in an awesome way and calls me. And I cannot see the highest towers being built without wanting to celebrate their birth, right there."[53]

Unappealing and controversial as these large, imposing buildings may have been, they commanded a level of attention not afforded to smaller, more commonplace buildings. "We have all come to some sort of accommodation with the towers," Goldberger concedes, "and there have even been moments when I have seen them from afar and admitted to some small pleasure in the way the two structures […] play off against each other like minimal sculpture."[54] Big buildings are easier to identify with simply because they have a larger presence in the lives of everyday

[52] Goldberger, Paul. *The City Observed: A Guide to the Architecture of Manhattan*. New York: Random House, 1979: p. 11. Print.
[53] "Program Transcript, New York: The Center of the World." *American Experience*. PBS. Web. 10 Apr. 2014.
[54] Goldberger, p. 11.

people. They also are more likely to be seen in construction, and as such enjoy a sort of honeymoon period with local residents after they are completed. However, this honeymoon glow soon fades away, and large structures soon have to succeed their merits and not just on their size.

Aside from being big, some buildings are esteemed because of their age. Simply put, humans value things that are old. Just as a baseball card or a car may appreciate in value with age, old structures acquire value by being around for a long time. This is especially true for structures that carry a certain aesthetic gravitas or historical significance – why else would Paul Revere's clapboard house still stand in the middle of modern Boston?[55] Paradoxically, however, as an aging structure becomes more beloved by the public it also becomes harder and harder to care for. Depending on how intense the upkeep costs appear to be, old structures may still be subject to remorseless demolition regardless of their good public standing. However, like cars and baseball cards, buildings go through periods of initial depreciation before they are considered 'classic' enough to be fought for. Paul Revere's house, for example, is several *centuries* old. When railway stations were first considered for reuse at the end of WWII, most of those that were destroyed or drastically overhauled had only been around for several *decades.* Only now that more decades have passed have we, as a collective mass rather than a group of academic elites, begun to truly mourn these stations' loss. We do not balk at destroying buildings from the 1980s like we do buildings constructed in the 1880s because these newer buildings have not yet earned the extra consideration. In age, even the most banal buildings acquire a sort of tenure that can ensure their ultimate survival.

At the end of the day most people *want* to keep these old buildings around, but when old structures have taken root in inconvenient places people don't have the option of picking it up and moving it somewhere else. At this point, people have to ask themselves *how much* they want the

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[55] "The Paul Revere House." *The Paul Revere House*. Paul Revere Memorial Association. Web. 20 Mar. 2014.

building in question. Oftentimes the answer is "not enough," but other times people act on their

benevolent intentions. In our case, old train stations are often reoriented toward a variety of uses

never dreamed of by their original designers. Looking at the stations described in Tables 1-5, we

can see how station buildings have been converted into hotels, banquet halls, restaurants,

convention centers, etc. Many of these converted stations have existed under new management

for years, showing how newly 'flipped' structures can potentially be more successful than their

original incarnations. As these old stations house new tenants they fulfill the goals set by Jacobs;

they become the training grounds for uses that might not otherwise be accepted in gleaming, new

centers of development.[56] To put it another way, when buildings are already in ruin *any* use is

better than the status quo, and in allowing unconventional uses we are often surprised by the

result. Oakland's former Western Pacific Station, for instance, is a case study in creative reuse.

Today the old station is home to a medicinal marijuana dispensary – a naturally popular

rethinking of what these beautiful, historic buildings can be to people today.[57]

Our instincts toward preservation and reuse are rooted in the fact that train stations aren't

just *buildings,* they are cities' front doorsteps. Stations are bridges to the outside world, and

when they close down people naturally feel spurned and neglected by a larger community that no

longer values their access. As Richards and MacKenzie put it,

> "The closing of a station intangibly but significantly diminishes the spiritual life of a
>
> country and its people, for it brings down the curtain with devastating finality on a stage
>
> that has seen a thousand dramas, comic and tragic, played out and has mirrored the

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[56] Jacobs, p. 197

[57] Werner, Matt. "From Train Stations to Pot Dispensaries: Old Oakland Walking Tour Is Full of Surprises." *Matt's Writing*. Blogspot, 24 Sept. 2012. Web. 22 Mar. 2014.

changing of moods of the nation, has etched itself into the working lives of some, the

emotional lives of others."[58]

When we abandon train stations, we abandon people, and in the preservation of old stations we

also preserve our meeting houses, civic centers, and forums for gossip and news.[59] This concern

is very much at the forefront of conservation projects like those proposed for Michigan Central

Station. Perhaps by converting Michigan Central, Detroit can be reintegrated into the nation at

large and the persistent pessimism hanging over the city may have an outlet to drain. Detroiters,

and indeed Americans in general, owe it to themselves to ensure they are connected, to ensure

they are valued. Destroying a historic railway station comes at a far greater expense than the loss

of a single building, and planners should always remember the human cost of their actions.

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There are more opportunities for the development, and just as importantly the

redevelopment of America's rail network than ever before. This is true of railway stations both in

terms of their position as transit nodes, as identified by Bertolini, and also in terms of their being

valued public places. The following research shows how time and time again such attempts at

redevelopment have proven fruitful. Over the past several decades, formerly war-weary train

stations have taken on mixed-use agendas and adapted to a society no longer dependent on their

old services. Other stations have put on new hats, so to speak, abandoning railway services to

become newly relevant in America's urban culture. While many stations have been destroyed,

some like Michigan Central sit vacant and unused. Shall these stations follow the path set by

Mount Royal Station, Baltimore's terminal-turned-art museum so often applauded as a pioneer in

urban reuse, or will they follow Atlanta's Terminal station to the grave?   While protections from

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[58] Richards, Jeffrey, and John M. MacKenzie. *The Railway Station: A Social History*. Oxford: Oxford
University Press, 1986: p. 5. Print.
[59] Richards and MacKenzie, p. 42

the NHRP often serve to delay these necessary transformations, stations today are not altogether safe from destruction as the near-demolition of Michigan Central has served to show.[60] Stations cannot sit unused forever. At some point they have choose whether to adapt or die.

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[60] Michigan Central Station was inducted into the NRHP in 1975.

QUALITATIVE ANALYSIS

As has already been touched upon, there are essentially no large, intercity railway stations in America today that have been able to get by without substantial change. Many stations have been forced to alter their structural footprints, while many others have had to augment themselves with secondary, non-rail services to prop up their bottom line. These measures are only available to stations structurally intact enough to undergo such heavy nipping and tucking; cosmetic adjustments are insufficient for stations that have not so easily weathered the tests of time. For some of these stations, the most obvious solution is demolition. Sometimes demolition is followed by the construction of a new train station in place of the old one, sometimes not, but all too often the demolition of a train station is followed by nothing at all – asphalt and weeds in place of what were once great monuments to American rail.[61] When a train station can no longer fulfill its requisite duties as a center of transportation, it must either fall back on being a public place or stand to lose everything. The following cases illustrate very different approaches to structural renewal. All are notable cases, and have been selected because they embody the most common outcomes stations in flux can expect to face.

Terminal Station, Atlanta

Terminal Station was built in 1905 under the design of Thornton Marye. One of Atlanta's two largest stations, Terminal Station played a pivotal role transferring people and shipping into one

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[61] [61] Storey, Steve. "Atlanta Terminal Station." *RailGA*. RailGA. Web. 22 Mar. 2014.

of the largest rail hubs in the American South.[62] The building was immense, and was bookended by two enormous bell towers rising over the front façade. The station was a Beaux-Arts-Spanish infusion – a real masterpiece of Southern American architecture. However, this belle's beauty would soon begin to fade. In the 1970s, the Southern Railway was facing significant financial strain. It ceased operations at Terminal Station in the first year of that decade, moving all service to Brookwood (now Peachtree) Station, a much smaller terminal across town. Southern retained the air rights over their abandoned railway tracks, which sat unused until the federal government selected the site for the construction of a new office building in 1971. Any such construction would naturally require the destruction of the existing station, so in 1972 Southern set to work tearing the old place down.

The Richard B. Russell Federal Office Building (a boxy tower reminiscent of an old air conditioning unit) hardly rouses an emotional reaction like the Terminal Station it replaced. At the time, however, the new building was seen as a godsend to a city smothered by persistent unemployment. When approached by the federal government to sell the property outright, James Picone – Director of Commercial Development for Southern Railway (an independent railway until joining Amtrak in 1979) said the sale of Terminal Station was done in part to aid in Atlanta's recovery. Testifying before the Congressional Subcommittee on Public Holdings and Grounds in 1975, Mr. Picone recalled:

> "[The] most important factor is the influence we believed this new Federal complex
> would have on rejuvenating the blighted railroad gulch area which for years has been a
> much maligned area in southwest Atlanta. In addition, it would create jobs in this
> depressed area of town where jobs are needed the most. And, although we did not realize
> it at the time, it is now obvious that during the construction phase it would be an

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[62] Storey

economic shot in the arm to the construction industry at a time when construction is the

lowest it has been in recent history, and most important, it would serve as an anchor for

the future development of southwest Atlanta."[63]

Mr. Picone's sentiments were echoed by other influential interest groups who buried the hatchet

to see Terminal Station fall. Jesse Hill, Jr., President of the Atlanta Chamber of Commerce,

testified before the Committee that constructing the Russell Building was necessary to expand

Atlanta's tax base, compliment other development in the city's south side, and spur the creation

of jobs.[64] In this last point Hill was backed up by Georgia's AFL-CIO President Herbert Mabry,

who said Atlanta's unemployment necessitated the building's immediate construction.[65] The

predators of Terminal Station had formed a unified front, and citing economic desperation the

government had no choice but to give in.

For railroad stations facing demolition, it helps to have friends. Unfortunately for

Terminal Station high costs of routine upkeep came to a head when the conservation of an old

building was of secondary concern to creating jobs and stirring economic activity. These

systemic imperatives alone may not have been enough to force or stay the execution of Terminal

Station, but they did provide an ideal *opportunity* for local interest groups to have their voices

heard. Groups like the Chamber of Commerce and local unions were able to use the decaying

Terminal Station for their own ends, providing their membership with jobs and money at the

expense of a valuable historic structure. Atlanta traded long-term appeal for short-term gains,

becoming a little less historic and a lot less interesting in the process. Dollars cannot supersede

history, which cities sometimes take for granted as something they will always have. But history

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[63] *Richard B. Russell Federal Office Building, Atlanta, GA*, 94th Cong., 142 (1975) (testimony of James Picone.). Print.
[64] *Richard B. Russell Federal Office Building, Atlanta, GA*, 94th Cong., 142 (1975) (testimony of Jesse Hill, Jr.). Print.
[65] *Richard B. Russell Federal Office Building, Atlanta, GA*, 94th Cong., 142 (1975) (testimony of Herbert Mabry, Jr.). Print.

is something earned, and cities facing dire straits owe it to themselves to shoulder the burdens of old, failed buildings, knowing that these buildings can someday be their biggest economic and social magnets.

Mount Royal Station, Baltimore

There is perhaps no better city to demonstrate how ingeniously old train stations can be repurposed than Baltimore, Maryland. Baltimore's Mount Clare Station (constructed in 1851) and President Street Station (constructed in 1852) are among the oldest stations in the country to have been successfully converted into the 20th and 21st Centuries. Mount Clare Station, for example, is now home to the B&O Railway Museum, and the station at President Street currently houses the Baltimore Civil War Museum.[66] Given their age, old stations like Mount Clare and President Street are ideally suited to modern-day uses that call for buildings that have been 'worn in.' Developers of hotels, upscale restaurants, and museums can easily make use of old railway stations that come pre-packaged with history and a reputation for grandeur. The possibilities for stations slated for conversion are relatively limitless. Baltimore's Mount Royal Station, for instance, shows how having a little fun with old stations can pay off for redevelopers making long term investments. Now a studio for the Maryland Institute College of Art, Mount Royal Station has become a beacon for wayward stations looking to adapt but are unsure of how to proceed.

The redevelopment team of Cochran, Stephenson, and Donkervoet were able to retain a great deal of the building's original integrity, sacrificing only the height of the men's and women's (separate) waiting rooms to create two floors of instructional space.[67] When renovations were completed, the new building was hailed as one of the best executions of

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[66] Burchard, Hank. "Baltimore Civil War Museum in Baltimore, MD." *Washington Post*. The Washington Post. Web. 11 Apr. 2014.
"History of the Museum." *History of the Museum*. B&O Railway Museum. Web. 11 Apr. 2014.
[67] Potter, p. 134.

adaptive reuse in American history, and CS&D won an award from the prestigious American Institute of Architects.[68] The 'Station Building,' as it is called today, is home to MICA's Rinehart School of Sculpture, which includes such features as a metalworking foundry, a weaving loft with large-scale looms, a dye kitchen, and a silkscreen exposure unit.[69] For over forty years the converted station has provided valuable services to the Baltimore community, more than making up for initial conversion expense. This success lies in choosing a renewed purpose – education – that was necessary to the community and would not conceivably go out of demand any time soon. Furthermore, because the Station Building is under use by a *public* institution, its ability to secure a profit is of lesser importance in comparison to the educational services it provides.

The success of Mount Royal Station has proven Alexander Cochran's claim that "the old could be beautiful, relevant, and still useful."[70] And as Baltimore shows us, train stations are uniquely suited to conversion projects due to, among other things, their innate ornamentation, central locations, and vast, flexible interior spaces. Perhaps it is for these reasons that so many conversion projects have cropped up across America since the conclusion of WWII. What were train stations yesterday are now bustling convention centers in Philadelphia and Jacksonville.[71] They are hotels in Minneapolis and Nashville.[72] They are Sacramento's Old Spaghetti Factory family restaurant and Oklahoma's Jazz Hall of Fame.[73] While these transformations are not completed at the flip of a switch, the stations of Baltimore show how much easier the process can

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[68] Potter, p. 134

[69] "MICA: Maryland Institute College of Art." *Mt. Royal Station Building*. Maryland Institute College of Art. Web. 22 Mar. 2014.

[70] Hayward, Mary Ellen., and Frank R. Shivers. *The Architecture of Baltimore: An Illustrated History*. Baltimore: Johns Hopkins UP, 2004: p. 304. Print.

[71] "Awards and Recognition." *PA Convention*. Pennsylvania Convention Center. Web. 22 Mar. 2014.
Davis, Ennis. "Lost Jacksonville: Union Terminal." *Metro Jacksonville*. Metro Jacksonville, 8 Jan. 2010. Web. 22 Mar. 2014.

[72]"About the Depot." *About The Depot Minneapolis*. CSM Lodging. Web. 11 Apr. 2014.
"Union Station Hotel in Nashville." *Union Station*. Autograph Collection Hotels. Web. 11 Apr. 2014.

[73] Burg, William. "Very Old Spaghetti Factory." *Midtown Monthly*. Midtown Monthly, 18 Aug. 2010. Web. 22 Mar. 2014.
"Facility Rental." *OKJazz*. Oklahoma Jazz Hall of Fame. Web. 22 Mar. 2014.

be with more groups working together. The original Mt. Clare Station, for example, was spun off

as a publicity maneuver by its parent B&O Railroad, and when the museum went independent in

1990 it was greeted with a significant endowment from freight rail company CSX.[74] Just as the

Terminal Station example shows how interests can pair off against stations, Baltimore's stations

show they can do the same toward stations' defense. In the topsy-turvy pluralistic game that is

city politics, wise conservationists seek out as many partners as possible in anticipation of rivals

down the road.

Pennsylvania Station, New York City

For fifty-three years Pennsylvania Station was a baroque Manhattan jewel. It was designed by

McKim, Mead, and White – one of New York's premier architecture firms and designers of the

Agricultural Building for Burnham's Columbian Exposition. Strict adherents to the monumental

school, MM&W refused New York's initial offer to construct a train station beneath a glitzy,

lucrative hotel. Civic idealism trumped the desire for profit, and when the final design was laid to

paper critics were stunned into submission.[75] The new, gorgeous Pennsylvania Station was

heavily influenced by the Baths of Caracalla, the most elaborately decorated public baths in

ancient Rome.[76] Like the Baths, 'Penn' Station was designed to be a space for the masses to

congregate, discuss events, and – as a secondary purpose – take advantage of a useful public

convenience. But despite good intentions, Penn Station (as it was originally conceived and

constructed) no longer exists. Its' trains have been relocated to a smaller station under the

ground, and a modernist sports and office complex now sits in the footprint of the old train house.

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[74] "History of the Station"

[75] Plosky, Eric. "The Fall and Rise of Pennsylvania Station." Thesis. Massachusetts Institute of Technology, 1999: p. 11-12. *The Fall and Rise of Pennsylvania Station*. Massachusetts Institute of Technology. Web. 30 Nov. 2013.

[76] Scherer, Margaret R. *Marvels of Ancient Rome.* New York: Phaidon for the Metropolitan Museum of Art, 1955: p. 96. Print.

Gone is the revered cathedral to American bombast, and in its place stands the straight-edged Madison Square Garden.

Why was such a distinguished and popular structure destroyed so early in its intended life cycle? The short answer is that Penn Station was losing money at a rate too steep to stomach for the Pennsylvania Railroad, its owner and chief tenant. Perhaps Penn Station's fate was foreshadowed by that of its inspirational model, the Baths of Caracalla, which in the 6th Century were subject to budgetary pressures of their own. At this point, the Romans were beginning to see the hair-cracks of an empire past its prime. Their intricate system of aqueducts, which provided water for the Baths, were beginning to fall apart. Some were completely destroyed by invading Goths. Faced with a shortage of water, Roman officials decided it was best to sacrifice the Baths, which despite their aesthetic appeal were easily disposable in a city literally faced with the prospect of having nothing left to drink.[77] While New York's situation in the mid-1950s was not quite so severe, the outlook for the Pennsylvania Railroad was. The automobile and suburbanization had significantly reduced the railroads' regular customer base. National ridership declined, and by 1951, the company was nearly $72 million in debt.[78] Faced with a steep choice, the Pennsylvania Railroad chose to save their empire by liquidating its New York hub.

This seemed a logical move. Penn Station was costing the Railroad $1.5 million annually, and the new Madison Square Garden (in which the Pennsylvania Railroad was to have a 25% stake) was sure to be more profitable.[79] From the city's perspective, more profits meant more to tax. As an added bonus, rail transit wasn't being *removed* from the area entirely, only

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[77] Scherer, p. 95-96
[78] Data from the Congressional Budget Office and Department of Transportation indicates a massive drop-off in aggregate U.S. passenger-miles traveled via intercity rail. This drop-off levels off in the early 1970s, and despite a mild increase in rail demand during the Oil Crisis, the number of intercity passenger-miles accounted for by rail has remained rather constant at around 5 billion annually since.
[79] Diehl, p. 145

relocated underground. More tax revenue and minimal disruption to existing transit meant MSG was a win-win for city officials, who quietly cleared it for construction. Sitting on the property was no longer justifiable; the opportunity cost of inaction was just too high. At the end of a long and gut-wrenching process, Madison Square Garden was completed in 1968. But rather than delivering the profits shareholders were promised, the complex actually cost its owners so much ($2 million annually) that the city had to intervene and bail them out.[80] New York lowered real estate taxes on MSG by 75% in order to forestall the complex's financial ruin and save face for what had become a massive political blunder. This measure deprived taxpayers of nearly $3 million annually, double the Pennsylvania Railroad's original loss. All that glitters is not gold – a lesson New Yorkers learned the hard way.

The case of Pennsylvania Station is a seminal one in conservationist circles. Its destruction drove many similarly endangered stations to pursue legal protection, a silver lining that might be drawn from an otherwise tragic tale. A case study in structural replacement, the story of Penn Station shows it is not always possible to have one's cake and eat it too. While Madison Square Garden was more efficient in its design and mixed in its use, New Yorkers saw little impetus to actually inhabit the space, and the middling success of Madison Square Garden shows how new structures can be plagued by the very same problems as the structures they replace. Sometimes the latent appeal of an old structure isn't visible when there is nothing else to make it shine. In these instances, it may only take the construction of a nearby park or sports arena to provide a station with necessary traffic and rejuvenate its viability as a public place. Penn Station's redevelopers, meanwhile, saw the old building only as an obstacle to future development, and as such decided to raze the above-ground structure like a doctor amputating a body to save a limb.

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[80] Diehl, p. 153

Indeed, historic structures and nearby amenities work best when working in conjunction with one another. Just as it would be idiotic to build a grand train station far removed from human activity, redevelopers cannot hope to stimulate new traffic by destroying the things that people likely want to see – namely, the stately terminal houses cities should be trying so hard to conserve. We must endeavor to ensure train stations are optimal means by which people can visit destinations of interest, as well as destinations in themselves. By replacing old stations with new ones, we surrender the second objective so that we may only possibly achieve the first. This is not a risk developers should want to take. Carelessly hacking away at a city's points of aesthetic, historical, and cultural significance eliminates the need for any such transport because there will be nothing left to be transported *to*. Historic structures should thusly be seen as sources of, rather than impediments to, future activity. Even if demolished structures are replaced, such surrender should hardly be an option for a city that truly values its culture and history, of which its constructed landscape is an integral part.

Union Station, Washington D.C.

Like Michigan Central and Penn Station, Washington, D.C.'s Union Station showcases the very best of Beaux-Arts, monumental design. The original terminal was built from 1903 to 1907 under the pen of Daniel Burnham himself. Like so many stations before it, Union Station was devastated by the rapid decline of rail travel, and by 1968 it had fallen into such a poor state that it was closed to the public.[81] An attempt to resuscitate the station came in 1976, when the federal government decided to transform it into a National Visitors Center for the country's bicentennial. The station received modest upgrades, chief among which was a sunken pit that would host an interactive learning zone called the 'PAVE' (primary audio-visual experience). These changes

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[81] "Union Station." *D.C. National Railway Historic Society*. National Railway Historic Society. Web. 07 Dec. 2013.

did little to attract new patrons to Union Station, and in 1981 the government was faced with a dilemma: should the building be cast off in the wake of changing market tides, or should it be given one last chance at redemption? By that point, the station had acquired thirteen years of mold and general decay, making any prospective redevelopment difficult to imagine. Despite the temptation to level the decrepit station and start fresh, the Reagan administration initiated what would become a $160 million renovation project.[82]

Today, the original terminal building is home to shops, restaurants, and movie theatres. A more modern building built behind the old terminal functions as Amtrak's national headquarters and services Washington D.C.'s bus system and a new passenger rail line.[83] These modifications have seemingly paid off in terms of ridership: today Union Station sees over 32 million passengers annually, more than double its capacity in 1981.[84] What's more, the Union Station Redevelopment Corporation, a wholly-owned government corporation working in conjunction with the private developer Akridge, is calling for further development of the facility to meet increased demand. In their Master Plan, the partnership proposes an expansion that will "be accomplished within the existing station footprint, preserve the iconic existing Union Station, limit negative impacts on surrounding neighborhoods, and respect the historic legacy of Daniel Burnham's original station design and Washington's city plan."[85] The final design will supposedly triple train ridership and double the number of trains going through the terminal,

[82] "Union Station: Celebrating 25 Years." *USRC*. Union Station Redevelopment Corporation, 2013. Web. 30 Nov. 2013.
[83] "Celebrating the 25th Anniversary of the Re-Opening of Washington Union Station." *YouTube*. National Railroad Passenger Corporation, 27 Sept. 2013. Web. 07 Dec. 2013.
[84] "Washington Union Station Celebrates 25th Anniversary of Grand Reopening." *Amtrak*. National Railroad Passenger Corporation, 30 Sept. 2013: p. 2. Web. 7 Dec. 2013.
[85] "Union Station Master Plan." *Amtrak*. National Railroad Passenger Corporation, 25 July 2012: p. 1. Web. 30 Nov. 2013.

figures which would constitute a much brighter future for a station that was "nearly falling apart until its revival in the late 1980s."[86]

As always, these bold assessments of future success should be taken with a grain of salt. Markets change, and as such we should not succumb to the same over-planning that doomed these monumental stations from the start. Redevelopers who go 'all in' based on ephemeral trends are sure to be disappointed when the future turns out far differently than they had expected. This is not to say ambition should be removed from the equation, for the most successful stations were built ambitiously, but rather that station owners should not let their appetites grow faster than their stomachs. At minimum we hope for stations that are flexible, able to survive on relatively small amounts of customers but also able to meet sudden surges in demand.[87] Rehabilitation should therefore be reserved only for stations that require fundamental change in the first place. D.C.'s Union Station extolls the virtues of rehabilitating such old structures whose futures may seem nothing but bleak. Those skeptics who believe old buildings can never be greater than they were at construction should look to Union Station, which despite its age has not yet seen its glory days.

Grand Central Terminal, New York City

Perhaps the greatest rail station in United States history, Grand Central Terminal has over the years become a national treasure. One need only look to the Saturday Night Live stage, which is fashioned to look like Grand Central's main waiting room, to see just how far it has permeated

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[86] Thomson, Robert. "Union Station to Become Intercity Bus Center." *Washington Post*. Washington Post, 30 July 2011. Web. 07 Dec. 2013.

[87] Grand Central Terminal in New York has been hailed for its seemingly "limitless" capacity; at the start of its construction in 1903, daily traffic stood at 44,200 passengers per day. This number increased to 88,500 in 1919 and 11,240 in 1921, a dramatic shift the traffic-friendly station was able to absorb. Belle, John, and Maxinne Rhea. Leighton. *Grand Central: Gateway to a Million Lives*. New York: Norton, 2000: p. 60. Print.

the American psyche.[88] This embrace is the product of Grand Central's success as both a thriving

rail center and picturesque public place, but only in part. Christopher Brown notes that

America's love affair with Grand Central is also due to the guilt people felt after witnessing the

premature demolition of Manhattan's other railway terminal, Pennsylvania Station.[89] Unwilling

to bear that shame again, New Yorkers rallied around Grand Central, lifting it to a position of

architectural sainthood as penance for their previous sins of omission. Unwavering public

support has provided Grand Central with a relative immunity from the wrecking ball, but it also

helps that Grand Central is in itself such a profitable enterprise.

The design partners at Reed & Stern set to work on Grand Central Terminal with a truly

grand vision. Like monumental stations of the time, Grand Central was built to be the "Glory of

the Metropolis."[90] However, unlike Penn Station, which initially eschewed efforts to lump

railway services and private business together under one roof, Grand Central Terminal was

designed to be a 'Terminal City' housing a variety of tenants. This City was to be developed via

the leasing of air rights, a concept which was at the time quite revolutionary. As per the standards

laid out in English Common Law, owning the air rights to a plot of land also means owning all

the air above and all the subterranean earth below.[91] Land owners often sell air rights more

cheaply than they do open land, meaning that prospective developers can save a great deal of

money by choosing to build over (or under) existing structures. In the case of Grand Central,

electrified train services could be housed underground while other enterprises could work surface

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[88] Elements of the SNL stage, including the 'To Trains' sign, spherical waiting room clock, and chandelier are all inspired by Grand Central Station.
Saturday Night Live set. Digital image. *Tumblr*. Web. 22 Mar. 2014.
[89] Brown, Christopher. *Still Standing: A Century of Urban Train Station Design*. Bloomington: Indiana UP, 2005: p. 74. Print.
[90] Belle and Leighton, p. 56
[91] Common law definitions in turn take their definition of air rights from the Latin legal maxim, *cujus est solum ejus est usque ad coelum et ad inferos* - to whomever the soil belongs, he also owns to the sky and to the depths. Railway stations were of the first American buildings to utilize this idea to turn a profit.
Goldschmidt, Leopold. "Air Rights." *Planning*. American Society of Planning Officials, May 1964. Web. 22 Mar. 2014.

land. William Wilgus, chief engineer of the New York Central Railroad, said at the time of

Grand Central's construction that "from the air would be taken wealth with which to finance

obligatory vast charges otherwise non-productive."[92] This mantra would be a powerful one in

urban real estate for years to come.

Failure to learn this lesson would cost other stations their lives, and many others would

have to go through significant alterations to incorporate more profitable elements to their original

designs. In a sense, Grand Central was 'redeveloped' from the start. Though the exact nature of

these secondary uses caused great infighting between the partners at Reed & Stern, at the end of

the day Wilgus's vision prevailed and a Terminal City rose above forty acres of electrified

track.[93] In so doing, the designers of Grand Central were able to ensure that they would be able to

pay their future bills and have a ready stream of patrons at arm's length. In contrast to Michigan

Central, whose in-house amenities were reliant on the success of the station, Grand Central was

inseparably linked with its surrounding environment. This symbiotic relationship between the

rails and nearby amenities, as well as an innovative design which allowed for easy foot-traffic and

train-switching, allowed Grand Central to outclass all other stations in terms of efficiency and

long-term viability.[94]

Such forward thinking is necessary when designing buildings as large and dependent on a

single use as rail stations. Diversification, therefore, is a powerful weapon against future blight,

and it is not surprising that in the postwar renovations of so many stations, a necessary

precondition has been the introduction of non-rail services. Grand Central's success also points

to the necessity of having nearby amenities to attract and retain potential rail riders. Amenities

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[92] Belle and Leighton, p. 47
[93] To pay for the significant costs of electrified rail, Grand Central attracted rents from hotels, apartment buildings, offices, clubs, and retail stores built between 42nd and 53rd streets. The success of this design would shape real estate development in New York City for years to come.
Belle and Leighton, p. 61
[94] Belle and Leighton, p. 61

make for successful public places, and as such Grand Central Terminal has become a successful

tourist attraction amongst people who during their visit may never even lay eyes on a train.[95]

Using this and other prominent cases as guides, we better understand which factors influence the

fortunes of an American railway station. By utilizing a basic statistical analysis, we can see if

these stations' experiences are case-specific or if they indicate patterns viewable across a wider,

national plane. Using a mixed-method approach, we should be able to determine just how

predictable and scientifically quantifiable train stations are as a subject, as well as pinpoint the

most likely causes for redevelopment success.

[95] Clark, Terry Nichols. "Urban Amenities: Lakes, Opera, and Juice Bars." *Cultural Policy*. University of Chicago, 8 Dec. 2002. Web. 7 Dec. 2013. <http://culturalpolicy.uchicago.edu/workshop/juicebars.html>. Draft: Version 11.

Chapter Five:

QUANTITATIVE RESEARCH METHODOLOGY

In studying the nuances of rail stations' place in contemporary society, I shall endeavor to follow Baer in pursuit of statistical evidence. As Bertolini suggests, stations are not just viable in themselves but are also the products of their environments. When these environments are not conducive to rail transit, the rail station naturally suffers. When stations are not hospitable public places, they likewise struggle for relevance and become burdens to the people around them. Depending on how well a station has been historically managed as both a purveyor of rail transit and as a center of public exchange, it will exist today in one of the following states:

1. *Conservation* – these stations still service trains, though some have been through hell to do it. Whether their long-term survival has been motivated by careful planning or major revisions that have twisted original plans inside-out, these stations remain both transit nodes and public places used by the people around them.

2. *Replacement* – this option is reserved for stations that are still viable as nodes, but not as places. When a city still requires access to the rails but finds it impossible to attain via extant facilities, old stations are destroyed to make room for new ones. This could mean one station is replaced with another, or that many train stations are replaced with a single facility that consolidates railway services under one roof.

3. *Conversion* – unlike stations that are replaced, converted stations are able to function as public places but not as transit nodes. During the conversion process, a station's transport capabilities are completely stripped so that the terminal *structure* may take

on a new purpose entirely unrelated to the rails. These stations epitomize urban reuse, and have become greater in number over the past several decades.

4. *Demolition* – these stations are torn to the ground and replaced with something entirely unrelated to rail transport. To avoid throwing money away, these structures are often razed to make room for things that might be more productive. Sometimes, however, stations are replaced with nothing at all. No matter the case, stations are demolished because they are deemed inalterably useless *both* as public places and as transit nodes.

5. *Neglect* – these stations are left to the elements, abandoned and uncared for. Neglected stations are usually those caught in 'development limbo,' unable to attract redevelopers, but also too expensive and/or tedious to destroy. Michigan Central is a pertinent example of such neglect.

These conditions are listed in descending order from 'best' to 'worst.' Crude as these rankings may seem, the urban planning community generally holds conservation to a higher degree than it does, say, demolition. This is not to say demolition is always the 'wrong' choice; sometimes a public might ask for intrusive old structures to be torn down, as in Miami where the demolition of a traffic-constricting train station was met with great fanfare.[96] Looking at the issue holistically, the demolition of an intrusive train station *could* serve to increase a city's net happiness and productivity. We must therefore assume that demolitions are undertaken with the best intentions in mind, hard as it may seem to do so. But even in these situations, city governments, businesses, and all other parties involved ought to consider the options at their disposal to keep historic

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[96] Einstein, Paul. "It's Coming Down This Week!" *The Miami News* [Miami] 23 Sept. 1963. *Miami Archives*. Blogspot, 4 July 2013. Web. 24 Mar. 2014.

structures around; demolition must only be a strategy of last resort. Unfortunately for many of yesterday's most storied train stations, today's cities have elected demolition far too hastily, and concerned citizens often lack the knowledge and resources to make their opposition heard.

While the virtue of demolition is often unclear, neglecting an old railway station is inarguably bad. Even Jacobs says neglect is a form of failure, albeit a necessary and evolutionary form of failure that fertilizes better development in the future.[97] Jacobs also identifies neglected buildings as the result – not the cause – of poor city planning.[98] At any rate, neglected stations are not effective public places or transit nodes. Whereas demolished stations may be replaced by structures that better serve the community's needs, neglected stations are, at least in the moment, eyesores that get in peoples' way. Neglected buildings can foster spiraling vandalism, which in turn can motivate other more vicious forms of crime. In their seminal (albeit controversial) article *Broken Windows: Police and Neighborhood Safety,* Kelling and Wilson demonstrate how even small levels of blight can lead to greater damage later on. They write:

> "[If] a window in a building is broken and is left unrepaired, all the rest of the windows
> will soon be broken. This is as true in nice neighborhoods as in rundown ones. Window-
> breaking does not necessarily occur on a large scale because some areas are inhabited by
> determined window-breakers whereas others are populated by window-lovers; rather, one
> unrepaired broken window is a signal that no one cares, and so breaking more windows
> costs nothing." [99]

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[97] Jacobs, p. 197
[98] Jacobs, p. 230
[99] Kelling, George L., and James Q. Wilson. "Broken Windows." *The Atlantic*. Atlantic Media Company, 01 Mar. 1982. Web. 18 Mar. 2014.
Researchers at Harvard and Suffolk Universities have concluded that at least in terms of neighborhood cleanup efforts, the Broken Windows Theory stands. In Lowell, Massachusetts in 2005, neighborhood maintenance was cited as the leading cause for a 20% drop in police calls in specified 'hot crime' areas. Johnson, Carolyn. "Breakthrough on 'Broken Windows'" *Boston Globe*. Globe Media Company, 8 Feb. 2009. Web. 18 Mar. 2014.

Thus, abandoned buildings have an adverse effect on their surrounding community. This is especially true for railway stations, which are typically larger than neighboring structures and more likely to stand out when blighted. Because safe, healthy, and happy communities are impeded by the presence of hollowed-out, boarded-up railway stations, planners have to seek out and remedy vacancies wherever they occur.

When these troubled stations can no longer be justified as transit centers they become candidates for structural reuse. But before redevelopers start drawing up their plans, they should remember that stations are uniquely *gifted* in their ability to be both public places and transit nodes. Doing both is optimal, doing one is less so, and doing neither is worst of all. Even when we consider conversion, a strategy often looked upon favorably by city residents today, we must ask ourselves whether they can really afford to lose their foothold in the country's rail network. While former stations may be beloved as museums or as restaurants, conversion strategies should only be reserved for those that are wholly unable to be renovated or maintained as transit centers. At the same time, stations should only receive full-scale renovations if simple maintenance is not an option. Rail stations in constant structural flux cannot cement themselves in the minds of local residents, and are therefore less likely to be successful public places. In sum, there is no 'right' and 'wrong' option, but redevelopers ought to consider this general hierarchy before breaking ground on their next Big Plan.

Independent Variables

To discover which structural and environmental factors most correlate with a station's long-term success or failure, I selected independent variables that were simplistic in nature and likely to yield generalizable results. For instance, so-called 'economic' factors may best be summarized by the availability of wealth. By measuring median income place by place, we will hopefully be

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able to see if the mere presence of money affects the standing of a nearby station. The same might be said for population shifts – does the movement of people positively or negatively affect the survival of railway stations? If the answer is yes, then future research may be able to delve deeper into the matter by asking more nuanced questions like, "how does the rehabilitation of railway stations change based on the presence of young people, or the percentage of residents living below the poverty line?" If there is no effect, then I would need to either select new variables or readjust my sample. By using such a top-down approach, I am able to test the waters, so to speak, and probe for the most clearly evident causes for rail stations' rise and fall. The independent variables for this study are as follows:

Region

Cervero (2003) shows transportation planning takes place mostly at the regional level, and due to differing philosophies about land use, among other things, even neighboring regions can choose drastically different approaches. The regions under study here are admittedly larger than those analyzed by Cervero, but again this research is designed to start off broadly and work its way down.[100] The Federal Railway Administration has divided the country into eight different zones which I use to study the effects of political geography on railway stations. These zones exist mainly for administrative purposes, but they conveniently span what most Americans would consider 'traditional' regions of the country; culturally distinct areas like the Deep South, Midwest, and New England are all represented by corresponding FRA zones.[101] Difficult as it may seem to label these territories with catch-all terms like 'conservative' or 'liberal,' we expect that regions more hospitable to 'smart growth' policies would most resist the wanton destruction

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[100] Cervero, Robert. "Growing Smart by Linking Transportation and Land Use: Perspectives from California." *Built Environment* 29.1 (2003): 66-78. Print.
[101] "Regional Offices." *FRA*. US Department of Transportation. Web. 26 Mar. 2014.

of old railway stations. Because these policies tend to crop up more in liberally-minded places like California, where 'blueprint planning' is used to develop transportation districts as a means of curbing urban sprawl, we expect that stations from the West Coast or Northeast would sooner be the subject to reuse than comparable stations in the South.[102]

Aesthetic Style

Though the term is subject to interpretation, the most truly 'monumental' train stations were constructed in America between 1890 and 1920. The monumental aesthetic was carried over in part, but not in whole, to subsequent generations of designers. Are bombastic stations built at the turn of the century more or less likely to survive than sleeker Art Deco stations built during the 1930s? What of the Romanesque, brick structures built mostly before 1890? As time goes on, design paradigms change. Depending on the simplicity, or conversely the *dullness* of these paradigms, we expect people to gravitate more toward stations of a certain aesthetic mold when seeking out significant structures worth saving. The present state of Cincinnati's Union Station – an Art Deco icon now home to a railroad museum – suggests why cleaner designs *generally* prevail. The station was supposed to take after Gothic styles, but architect Paule Philippe Cret instead created a station "more modern, more exciting, and less expensive" than the one originally proposed.[103] These modifications made Union Station a treasured Cincinnati fixture, easier to care for yet just as expressive as more baroque stations from the past.

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[102] Barbour, E. and M. B. Teitz. 2006. *Blueprint planning in California: Forging Consensus on Metropolitan Growth and Development,* 171–200. San Francisco, CA: Public Policy Institute of California. These findings are bolstered by Margerum, et. al., who identify Oregon, Washington State, and Colorado as other bastions of smart growth. Aside from being 'blue-ish' states, these places all fall within a similar geographic swath of the country, suggesting how similar philosophies crop up in regional blocs. Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. "Metropolitan Smart Growth Centers: An Assessment of Incentive Policies in Four Regions." *Journal of Transport and Land Use* 6.2 (2013): 21. Print.

[103] Potter, Janet G. *Great American Railroad Stations*. Washington, D.C.: Preservation, 1996: p. 397. Print.

Yet for every example of straight lines overpowering gilded columns we see another example in the reverse. Grand Station Terminal, Washington Union Station, and Boston's South Station are all beloved examples of intricate design – designs which have don't seem to be interfering with these stations' current success. While much ink has been spilled lamenting the fall of Beaux-Arts classics like New York's Penn Station, the endurance of similarly styled buildings in other places suggests that the common wisdom is not so wise, and that more elaborately designed stations may be no more susceptible to demolition than their peers. Only the data will assess the validity of this claim.

Year of Construction

Though we expect a station's year of construction to be somewhat reflected in its architectural style (we would be hard-pressed to find a building today built strictly from the Beaux-Arts mold), the year of construction is an important factor worth studying on its own. The reasoning behind this is not difficult to grasp: stations that are older should be more difficult to keep up and, therefore, less subject to reuse. This is especially worth noting given how architectural styles often overlapped and competed with one another at the same time. While I might want to make the same prediction for two similarly-styled buildings, when one is thirty years older than the other these predictions are likely to differ.

Government Type

Though many entities oversee railway stations' administration, cities often play a gatekeeper role. Dahl says that cities are naturally pluralistic, and when disputes arise over things like land use,

cities are expected to act as mediators. [104] In the end, struggling train stations do not survive

without the city's blessing, and hungry developers cannot demolish stations without the city's

explicit consent. Because city governments are staffed by elected officials, redeveloping a

railway station is unavoidably a political process. The politics of redevelopment, however, are

most intense when dealing with those in direct contact with the project in question; those living

across town from a station under redevelopment are less likely to monitor or care about the

process than people living a block from the site. The easier it is for officials to ignore more vocal

constituents, the easier it should be to approve of demolition projects likely to stir controversy.[105]

Likewise, governments insulated from angry voters can more easily defer action on decrepit

railway stations, allowing them to sit vacant. I hypothesize that in electoral systems where the

executive has more independent authority, calls for a station's reuse are less likely to be heeded.

Conversely, in cities where the executive's power is diffuse and dependent on pleasing parochial

voters, conservation and conversion will be most common.

Population Growth

Railroads are only useful when there are people to use them. Therefore, as the amount of people

in a city increases, the greater the value of railroad infrastructure. But population *changes*, and

the rates of change are of the utmost importance when deciding where to invest in rails. For

example, Cleveland's population in 2010 was 2,077,240 while Columbus had a population of

1,836,536.[106] Though Cleveland may seem the likelier rail hub because of its large population,

between 2000 and 2010 its population decreased by 3.3%. When one compares these figures to

Columbus, which grew 13.9% over the same period, Cleveland seems less attractive to rail

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[104] Dahl, Robert A. *Who Governs? Democracy and Power in an American City*. New Haven: Yale UP, 1961: p. 97-100. Print.
[105] Dahl, p. 115
[106] 2010 United States Census

providers like Amtrak looking to maximize their customer base in the long-term. I should

therefore expect cities with higher rates of population growth to resist demolition and embrace the

conservation of extant railway stations. Because population change can sometimes be massive

and unexpected, I might also expect replacement to be a popular strategy in cities that suddenly

see large influxes or drainages of potential customers.

Population Density

Cervero and Guerra show that trains are only able to turn a profit in areas of high population

density.[107] This profit is necessary to the long-term survival of railways and, by extension,

railway stations. As has been noted, railway stations are inherently convenient for people

traveling into and out of urban cores. When more people live and work around a railway station,

this convenience factor only goes up. Conversely, railway stations in more diffusely populated

areas (high as the total population may be) should not be as sustainable – it makes no sense for

travelers to drive thirty miles or more only to park, leave their car, and go another seventy miles

by train. When travelers are forced to choose between an exurban train station and an exurban

airport, the advantages of the former are negated and the latter becomes the preferable choice.

Ticket prices factor into these choices somewhat, but nevertheless we expect to see the majority

of conserved stations in areas of high population density. Based on our assumption gleamed from

the work of Cervero and Guerra, we would also expect to see more demolished, converted, and

neglected train stations in areas of lower population density, where rail transit is less likely to turn

a profit and railway stations are less likely to be in demand.

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[107] Cervero, Robert, and Erick Guerra. "Urban Densities and Transit: A Multi-Dimensional Perspective."
Berkeley. UC Berkeley Center for Future Urban Transport, Sept. 2011. Web. 26 Mar. 2014.

Income

It is no coincidence that subway stops built in higher income neighborhoods tend to be cleaner and better maintained than those in neighborhoods of lower income. If this is any indication of political voice, residents in wealthier areas seem to speak louder when petitioning the powers that be for better-quality transportation centers. Perhaps the effects of wealth are equally evident when looking at stations along U.S. rail routes. Using this subway logic, we would expect wealthier cities to be more vigilant for decaying stations than their poorer counterparts. And because we would expect the presence of nearby wealth to have a positive effect on stations' ability to receive costly renovations, conversion and conservation projects should be more frequent amongst stations in higher-income cities. But as with population, wealth (or more specifically, household income) is subject to fluctuation. Smart planners would likely study these fluctuations for patterns before spending millions on a new transportation center, investing heavily in those places where populations are dramatically increasing.

Substitute Stations

As has been noted, cities are (or at least should be) hesitant to cut themselves off from larger transportation networks. When cities demolish their only train station, this is precisely what happens. Therefore, when a station is the sole provider of rail transportation in a city, we assume that its chances of survival go up exponentially. These are the stations we expect to be preserved, not destroyed or converted to non-transport uses. Such options ought to be reserved only for cities that can easily divert residual passengers somewhere else, thus keeping their rail access alive while exploiting more profitable uses for superfluous stations.

Access to Amenities

Stations are successful public places only when the public values them as such. Access to nearby amenities like universities and restaurants increases the public's contact with a station, which gradually increases their level of attachment to the building itself.[108] I therefore assume stations with access to many nearby amenities will be most easy to conserve. Because the relationship between transportation centers and amenities is often symbiotic (trains funnel in the patrons of trackside amenities, whose vitality increases the demand for rail travel), I also expect stations with high access to amenities to be seldom demolished. This is in line with the research conducted by Carr, et. al, who demonstrate that even floundering railway stations are valuable assets to the surrounding community. Should we find that strategies of reuse and demolition *are* more prevalent among stations with high access to amenities, such a result would cast doubt on the assumption that transport access creates vibrant neighborhoods, and not the other way around. At any rate, neglect in these high-traffic areas should be practically unfathomable. Areas made popular by the presence of many amenities are competitive, and empty structures aren't likely to be tolerated amongst high-value neighbors.

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<u>Sample Selection</u>

In order to maximize the authority of this research, I make sure to include cases from all around the United States. These cases ultimately came from the fifty most populated U.S. cities. When one looks at population records, it is curious how some cities that are currently highly populated were relatively unpopulated at the times when train stations were made to change.   Studying stations from cities like Colorado Springs, Houston, and Raleigh which experienced rapid increases in population allows us to see what happens when rail stations are subjected to sudden ground swells of demand. The same can be said for cities like Detroit that have to date

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[108] Clark

experienced severe migrations *away* from the city core. These shifting urban landscapes provide us with the most interesting cases, and my sample is thusly drawn from cities with greatly varied demographic histories. Some stations come from the same city, whereas a few larger cities (Austin, Texas for example) are not represented because they did not have intercity rail stations old enough to fit within the required parameters of this study.

These parameters have no set beginning, but do have an end – the conclusion of WWII. All stations built after this point were omitted because their designers were likely aware of the waning postwar market for trains. As such, postwar stations were built more conservatively than their predecessors. The foci of this study are train stations that purvey both rail transport and public space – stations that require Big Plans. By contrast, the boxy, utilitarian "Amshacks" erected after rail ridership began to dwindle were the results of planning small.   In Rochester, New York, for example, a colossal New York Central Depot was destroyed in 1965 only to be replaced by a single-story, rectangular unit designed to handle the most essential rail traffic and nothing else.[109] Such a no-frills experience is contrary to the purpose of railroads. Daniel Burnham would certainly argue to this point, as would scholars like Richards and MacKenzie. Because Amshacks are essentially the antithesis of the stations I wish to study, my sample is limited to terminals built before rail travel peaked in 1945.[110] This fixed limit still contains the rise and fall of the City Beautiful, allowing me to see if monumental structures have been uniquely susceptible to the trials of age or if the current plight of railway stations is driven by more than aesthetic persuasion. Thus, while my research has been largely inspired by the history of America's monumental terminals, I cast a wider net in selecting cases for quantitative analysis.

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[109] "Rochester's (Inspiring) Old Railway Stations." *Reconnect Rochester News*. Reconnect Rochester, 7 Nov. 2010. Web. 18 Mar. 2014.

[110] Lorraine Diehl writes that in 1945, 75% of intercity travel occurred by train. By 1955, that number had already dropped to about one-third.
 Diehl, Lorraine B. *The Late, Great Pennsylvania Station*. New York: American Heritage, 1985: p. 142. Print.

As a final disclaimer, my sample is limited only to train stations that literally service passenger trains. Though subway and trolley stations may bear some semblance to the traditional railway terminal, they are not the same. Subways, trolleys, and light rail lines exist primarily to facilitate *intracity* transit rather than *intercity* transit. I disregard all modes of intracity transit to compose a sample of stations that appear on the same transport network. Two adjacent subway stops may be nodes in an individual city, but far-flung train stations in Boston and San Diego are nodes on a more national plane. Naturally, these stations serve different purposes for different people and are not directly comparable. Furthermore, stations serving smaller communities are likely to be smaller themselves, and therefore less interesting to study. I want to study stations that embody the 'Big Plan,' stations that arouse emotion whenever people pass by.[111] By that same token, I do not study freight stations and other facilities fit for trade alone. Without the ability to be public forums, freight stations already disregard one of the two principal goals monumental designs set out to achieve. In order to narrow my focus only to the stations Bertolini describes, my study is concerned only with intercity passenger terminals.

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[111] Kolson, p. 56

QUANTITATIVE ANALYSIS

In my attempts to find correlation between train stations' individual circumstances and their condition on the streets of modern cities, I will point the way for more detailed, specific research in the future. This quantitative analysis will hopefully produce some strands of theory that others might take hold of and weave into more conclusive analysis. My research is clearly inadequate in this regard, for if there is any preliminary conclusion to be drawn by looking at the data spread presented in Tables 1-5, it is that no single variable acts alone to guarantee a station's renewal or its retrenchment. While there are some patterns worth noting, these patterns are not blatantly evident to the point that further study would be unnecessary. Nevertheless, in the pages that follow I will analyze these results more deeply, keeping in mind that a lack of discernable correlation is a valuable result in itself.

Year of Construction – Figure 1

Using the data presented in Figure 1, we can see how a station's age does little to hinder or benefit its chances of survival. My initial hypothesis, which stated that older stations would be more subject to demolition and replacement, is only narrowly confirmed. Between 1885 and 1910, what was essentially the golden age of monumental design, ten train stations (of the eighty I study) were demolished and four were replaced. After 1910, only three stations were torn down and one was replaced. This may seem like a convincing affirmation of our hypothesis, but two thirds of the stations sampled were built before 1910, meaning there were simply more stations from this era to destroy – a distributive problem that will come up again. At any rate, older stations seem only slightly more susceptible for demolition than do newer ones. Conversely,

stations built after 1910 *do* seem less likely to be destroyed, but not by much. It may be interesting to delve further into this variable, perhaps creating a hybrid design analyzing the effects of a building's age *and* its architectural style. Aside from suggesting such a next step, this particular explanation turns out to be unhelpful.

Aesthetic Style – Figure 2

It would perhaps be more useful to study stations in terms of their aesthetic groupings. According to my results, stations built in the Romanesque Revival and Beaux-Arts schools are most plagued by demolition. This is not surprising, as many of the most influential romantic architects, such as the widely noted H. H. Richardson, studied at the famous Ecole des Beaux-Arts which would lend its name to the next generation of baroque design.[112] Indeed, the Beaux-Arts movement would be even more ornate than the movements that preceded it, and today it is this school which is most associated with the monumental architecture we have studied here at length. But there exist just as many examples of reused Beau-Arts stations as there are destroyed ones; again, it just happens that this particular style has more stations from which to sample in the first place. English Revival terminals, on the other hand, seem most easy to convert. The Anglo-inspired stations tend to be smaller in size than the others – so small, in fact, that even today's lightened levels of rail traffic might be too much for these buildings to handle. This small size comes with advantages, however. Compared to other stations on my list, those constructed in the English Revival style seem able to exist much more unobtrusively in urban centers. Along with their inherent historical 'look,' the ability of these stations to peacefully coexist with the neighbors makes them ideal candidates for conversion and new use.

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[112] Meister, Maureen. *H.H. Richardson: The Architect, His Peers, and Their Era*. Cambridge, MA: MIT, 1999. Print.

My assumption that Art Deco and Mission Revival stations would be easier to maintain seems all but confirmed as well. Within these two genres, only one station was replaced (Houston's Grand Central) and only one was destroyed (San Antonio's KATY Depot). Lawrence Grow suggests the enduring success of Mission-style stations comes from their innate 'holy order.' While they were not religious per se, these stations were styled after modest, priestly dwellings constructed during Spain's exploration and occupation of what is today the Western United States. "The cool, simple mission stations were almost the antithesis of these highly-ornamented bungalows," Grow writes. "In the hands of truly creative architects, the Spanish Colonial was given a form that was both traditionally correct and modern in expression."[113] Likewise, buildings built in the Art Deco style constantly merit labels like 'streamlined' due to the linear, geometric nature of their designs. Grow says these buildings were conceived by railroad companies that had grown "fat, rich, and tired" until the Great Depression forced them to abandon notions of creative eclecticism and embrace economy.[114] Designs from the Art Deco school stressed this much-needed efficiency, which is no doubt part of the reason so many still stand today.[115]

Region – Figure 4A and 4B

As was probably expected, regional studies did little to explain the fates of train stations. I expected more southerly, conservative regions to be most resistant to reuse, but in actuality these regions showed little deviation from other, more liberally-minded parts of the country. We can see that cities in the so-called 'rust belt,' namely Chicago, Cleveland, and Columbus, are just as willing to destroy or vacate old stations as cities in the South, suggesting the debate shouldn't be

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[113] Grow, Lawrence. *Waiting for the 5:05: Terminal, Station, and Depot in America*. New York: Main Street/Universe, 1977: p.84. Print.
[114] Grow, p. 120
[115] Grow, p. 120

divided across a north-south or east-west axis. As far as demolitions are concerned, the data

suggests that looking at cities (or units even smaller) rather than large, multi-state regions might

yield more precise, explanatory results. For example, in the postwar era Houston has torn down

three stations. Chicago has torn down four over the same period. Together, these two cities

comprise over a third of the total demolitions I uncovered nationwide. What's more, stations

from these cities were often destroyed in quick succession. In Houston, the Southern Pacific

Station and the MKT Depot were destroyed within two years of each other – in 1958 and 1960,

respectively. Perhaps leveling both stations at once was done for the sake of efficiency, although

perhaps there was something unique about Houston in the late '50s and early '60s that put historic

train stations more in danger of destruction.

Government Type – Figure 5

We initially hypothesized that less restricted city governments, or city governments less

dependent pleasing parochial voters, would be freer to neglect or otherwise alter train stations

beyond their initial uses. The data presented in Figure 4 indicates this claim has some validity.

The vast majority of city governments are run under the strong-mayor system, meaning that the

mayor is independently elected by the city at large and has the powers of chief executive. The

city council exists to send proposals to the mayor, who chooses to implement them as he or she

sees fit.[116] Under these systems, the mayor has a greater degree of jurisdictional authority,

allowing him or her to initiate more controversial conversion and demolition projects and ignore

stations that sit empty. In cities with strong mayors, we do indeed see more stations being

neglected, converted, and demolished. But due to the overwhelming number of large city

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[116] New York City is an ideal example of a strong-mayor system: "Citywide Organization Chart." *New York City*. Web. 7 Dec. 2013.

governments that are run under these systems the large, aggregate number of these stations is hardly surprising and tells us little about the connection between executive power and the ability to counteract majority will.

What is telling, however, is how there is only one instance of demolition amongst cities run by council-manager systems. While only about 15% of the stations sampled came from cities run by managers, the near absence of demolished stations in these cities is rather curious. These findings run contrary to our initial hypothesis which stated that due to the lack of electoral constraints placed upon city managers, cities with council-manager governments should be freer to destroy or ignore aging rail stations. However, the purpose of council-manager systems is twofold. While these systems are designed to ensure technocratic administration of city affairs, they are also designed to ensure a city's voters have more of a say in how they are administered. While the position may be called the city 'manager,' the manager only manages what the elected Council tells him/her to. He or she serves at the pleasure of the Council, which is made up of councilors or aldermen keen on protecting their individual constituents. With no executive power to overrule these political interests, the apolitical manager is forced to implement the likely uncontroversial tasks imposed by the elected Council.

Using the city of Chesapeake, Virginia as an example, we can see how a city's administrator does not often have the freedom to exercise power at will. Chesapeake compares its system to that of an "American corporation, with its shareholders (voters), board of directors (City Council) and Chief Executive Officer (City Manager)."[117] While a CEO may be the figurehead of a business, he or she is only really able to guide the wishes of the board, which ultimately has the final say in administrative affairs. Therefore, it is not shocking that our initial hypothesis is overruled. Our findings indicate that in matters of train station redevelopment, it is

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[117] Council-Manager Form of Government." *City of Chesapeake*. City of Chesapeake. Web. 18 Mar. 2014.

less a matter of executive power and more a question of how many hurdles the executive has to leap over in order to get a controversial project off the ground. The data seems to indicate that rather than stir the pot, these unelected managers prefer to keep their positions and do not buck their respective Councils. Conservationists looking to preserve railway stations should know in advance that their fights will be harder in cities with independently elected, executive mayors than in council-manager systems.

Income – Figure 6

If any one piece of evidence is to be drawn from my analysis of income and its effects on train station survival, it is that train stations are not a rich man's toy. Indeed, of the cases sampled, most demolished stations came from cities where inter-decennial income growth outpaced 20%. Though the correlation is less strong, the same can also be said for stations that were replaced. This seems to indicate that in cities where income is on the rise, people are less reliant on trains and train infrastructure. In these cities, people find it increasingly easier to substitute their trains and public transports for cars of their own, rendering train stations useless. These findings run contrary to our hypothesis, which stated that in areas of higher income growth, station planners might find conversion and rehabilitation strategies easier to implement due to their immediate access to nearby funds. This hypothesis would only hold true, however, when those with the money are willing or even interested in turning it over. The data suggests wealthier interests and more prosperous households have better things to spend their money on.

We also see vacated train stations cropping up more toward the lower end of the economic growth scale. This tacitly confirms the second part of my hypothesis, which stated that in cities with growing income the pressure to grow even further and respond to the interests of an increasingly wealthy class compel cities to take care of blighted, empty stations as quickly as they

can. But looking again at these cities where income is growing more slowly, or even shrinking,

we can see that conservation strategies are far more frequent than they are in cities of higher

income growth. One explanation for this is that cities with languishing income growth tend to be

places where people have become entrenched – there is no 'new money' forcing them out. In

these more stable cities like Chicago and New York, we don't expect the demands placed upon

train stations to change very much year to year, allowing stations from these cities to stand

unhampered for longer periods of time. Again, we might also suggest that trains and other forms

of public transportation go where there is a public in need, which more often than not refers to

people with lower income and the inability to pay for more costly personal transport.

Population Change – Figures 7 and 8

To research population shifts, I sourced my data from metropolitan statistical areas as well as

urban areas.[118] Using both units, I was able to account not only for those in direct, walkable

proximity to a railway station, but also those from nearby towns that still were likely to consider

inner city stations their own. For instance, San Francisco, California technically does not have

access to Amtrak's network of intercity rail routes. However, San Franciscans can easily use the

nearby Amtrak station in Emeryville, a city legally separate from San Francisco but still a part of

the same metropolitan area. Because rail markets spill over political boundaries, I found it useful

to start my analysis off by looking at metropolitan areas, then tightening my focus to more

compact urban ones. Should metropolitan patronage turn out to be more influential than the

patronage of a station's immediate neighbors, we might conclude that stations are looked upon

more as objects of transport utility than we originally believed. Conversely, if changing urban

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[118] The Census Bureau defines metropolitan areas as cities with at least 50,000 residents and surrounding communities that are socially and economically linked to the core, as measured by daily commuting. "Metropolitan and Micropolitan." *Statistical Areas*. United States Census Bureau. Web. 26 Mar. 2014.

populations have the more profound effect, then stations truly are dependent on their status as public places to people living and working nearby.

Looking at the data presented in Figures 7 and 8, we can see that no matter the sizes of our subjects, the data does not reflect any obvious correlation between population change and the safety of a station. Looking (or rather, squinting) at Figure 8, we may possibly conclude that metropolitan areas with relatively stagnant populations conserve train stations more frequently. We might also say cities with higher degrees of growth are more likely to demolish or convert old rail stations, which contradicts our original hypothesis that said stations would, in growing places, be better protected as both public places and as transit nodes. While these conclusions are made with very little confidence, they do speak to a growing theme: train stations do not seem directly tied to the notion of 'prosperity.' Instead, when placed in areas of greater income and population growth, train stations seem to be in the same or *greater* danger than those in cities where the population and economy are stagnant.

Density – Figures 9 and 10

Looking again at both urban and metropolitan data, we can see that population density tends to have a slight 'sweet spot' effect, wherein cities with moderate to high population density seem best equipped to maintain old train stations. The prevalence of demolition in tightly-packed Chicago, as well as the replacement of Penn Station in ultra-dense New York City indicate that stations are not safe in even the densest areas where they are supposed to excel. We speculated that stations from lower-density areas would be less likely to survive due to their weaker marketability, but the data suggests that the opposite is equally (or perhaps even more) likely to be true. The most logical explanation for this is that when population density rises, we expect to

see an increased demand for new buildings. When this demand is particularly high, cities gladly sacrifice underused railway stations so that they may free up land for new construction.

In this way, centrally-located stations like Terminal Station, Grand Central and Penn Station are dealt a difficult hand from the start. For one thing, these stations can more easily draw in regular customers who live and work nearby. On the other, these stations are also expected to *retain* their customers, and fail to do so at their peril. Pressure to regularly fill trains is exacerbated by the presence of air rights. As the cityscape surrounding an old train station becomes taller and denser, the more out of place that station seems lying flat and low to the ground. When developers have the ability to utilize air rights, wherein the sky is literally the limit, old railroad stations must strive to perform better and better as their possible replacements loom larger and more tempting to developers looking to cash in on dense, high-rise urban living.

The following independent variables were studied without the use of statistics, but rather as miniature case studies. The study of these variables was, I felt, necessitated by implications put forth by the cases presented in the qualitative section of my research design. The following analysis should be taken in conjunction with the statistical findings listed above:

Access to Amenities

Though the passage of time can put great strain on a railway station, it can also bless it with new and exciting amenities. The more shopping malls, cafés, museums, and colleges that are built around a railroad station, the more likely railway services are going to be requested and used; why struggle for parking near your favorite urban restaurant when a train can take you straight there? Nearby amenities also bolster a station's position as a public place. Joggers at a nearby park may come inside a train station to cool off on a hot day, just as businessmen on their way to

work may make buying a newspaper at the station concession stand part of their morning routine.

At any rate, stations, like all public structures, are benefitted simply by coming into contact with many people every day. When a station is surrounded by constant buzz, the likelier it is to become engrained in peoples' minds, to become a part of their normal setting. But according to Terry Nichols Clark, amenities do not only include such manmade, constructed things as opera houses and art galleries. Temperate weather, topographic variation, and the presence of nearby water all serve to increase a place's appeal, and can therefore be considered *natural* amenities. [119]

Looking at railway stations we have sampled, we can see that access to both constructed and natural amenities matters a great deal. Washington D.C.'s Union Station is perhaps the finest example of how tapping into amenities can embed a station in its surrounding area. Unlike Penn Station, which was crushed in New York's cutthroat, vertically-oriented real estate market, Union Station has enjoyed relative safety as a monument among monuments. D.C.'s terminal hit hard times, as did all stations, but was salvaged due to the lynchpin role it played in shuttling tourists to and from sites of interest along the National Mall. Having a rail hub so close to things like the Washington Monument and U.S. Capitol enables tourists to avoid egregious Beltway traffic and affords them views of one of the Capital's most compelling, though perhaps unexpected, national treasures – the station building itself. The newly revitalized station is second only to the National Air and Space Museum in terms of its annual foot traffic, proving the benefits of amenities-based urban renewal and setting a worthy example for other struggling stations around the country.[120]

San Diego's Union Station took this example and ran. Since its construction in 1915, Union Station has become a thriving and necessary component of San Diego's urban growth. Situated in the city's downtown business district, San Diego Union is a ten-minute walk from ten

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[119] Terry Nichols Clark describes how people are naturally drawn not only to natural amenities like lakes and mountains, but also constructed amenities like coffee shops and stores.

[120] "Union Station Redevelopment Corporation: History." *Union Station Redevelopment Corporation*. Union Station Redevelopment Corporation. Web. 08 Dec. 2013

hotels, two university centers, and a number of upscale restaurants. The tallest office building in the city sits only a block away, and a five minute stroll will get you to the San Diego Bay. Situated around the waterfront are a maritime museum, two marinas, three public parks, and a retired aircraft carrier.[121] Visitors can get a good look at the Bay, as well as sites like Petco Park and the historic Gaslamp Quarter by stepping aboard the trolley, which conveniently has a stop next to Union Station's front gate.[122] These constructed amenities are plenty enough on their own, but when coupled with San Diego's warm, sunny climate and scenic position on the California coast their value only increases. Drawing on these advantages, Union Station has retained a solid customer base over its near century in service, and in 2013 was ranked 3rd amongst California's busiest railway stations, and 13th among all stations on the Amtrak system.[123]

Compared to Michigan Central Station, San Diego Union's staggering amassment of amenities makes it look like an overachiever. Unlike its pacific counterpart, Michigan Central sits surrounded by mostly dilapidated buildings and vacant lots.[124] The plus side to this relative dearth of nearby amenities is that there aren't many developers salivating over station land, but this is little solace to Detroiters seeking a final verdict on a problem that has been plaguing them for years. Perhaps growth in nearby Corktown, a proud, quaint, and rapidly improving Detroit enclave, will stir the redevelopment of the old station grounds and give the building reason for standing beyond its currently default existence. Over the past ten years the arrival of new bars, restaurants, and a forthcoming distillery have reinvigorated the neighborhood and, by admission of Detroit's own tourism webpage, made Corktown "not only a place to visit, but a place more

[121] Google Maps
[122] *MTS Trolley Map*. Digital image. *California High Speed Rail Blog*. California High Speed Rail Blog. Web. 28 Apr. 2014.
[123] "Amtrak Fact Sheet, Fiscal Year 2013: State of California." *Amtrak*. Amtrak. Web. 28 Apr. 2014.
[124] The Detroit Works Project puts Michigan Central in a relatively high-vacancy area near the city core. "Detroit Future City." *Detroit Works Project*. Detroit Works Project. Web. 7 Dec. 2013.

and more Detroiters are proud to call home."[125] The structural safety of stations is dependent on fostering such local pride. By seeking out connections to nearby amenities, and by becoming amenities in themselves, stations like Michigan Central pull communities closer, stitching together bonds that will help troubled areas hold together in times of future strain.

Substitute Stations

The presence of amenities makes a station more attractive amongst its peers, which in a desperate situation can be the deciding factor saving it from demolition. When cities have to choose between two train stations, they are far more likely to choose the one with a strong community base and access to plenty of nearby amenities. The debates swirling around New York City in the mid-twentieth century prove this to be true, for if Penn Station had a few more things to see and do nearby it may well have been the station standing today. All our accolades instead fall upon Grand Central, due in large part to its visionary Terminal City design. By building amenities within itself, Grand Central was able to govern its own future independent of the local business culture. What's more, in constructing Terminal City Grand Central's redevelopers kept the old head house intact, thus preserving what would become one of the City's most successful historic amenities and anchoring the area to a structure that already manifested the public's affections.

By destroying the original Penn Station, New York destroyed what was likely the strongest source of life in that part of the city; the old building stood in area dominated by imposing, monumental structures like the General Post Office that intimidated rather than welcomed causal passers-by. Shopping centers, hotels, and other amenities were clustered far away in Herald's Square, depriving Penn Station of the valuable foot traffic which appeared in

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[125] "There's a Reason for All the Hype about Corktown." - *Visit Detroit Blog*. Detroit Metro Convention and Visitors Bureau. Web. 28 Apr. 2014.

places like the nearby Grand Central Station.[126] Grand Central was positioned between two city

blocks and served as a valuable passage for pedestrians, making it at least *seem* like the station

was always at capacity, even when it wasn't. Proximity to amenities, in this case, served to save

Grand Central and doom Penn Station when the city was forced to choose. However, it is

important to note that New York City *had* a choice between stations in 1963. In sacrificing one

rail terminals, city officials could feel confident knowing the other would be able to pick up the

slack (not to mention the slack taken up by the new Penn Station buried under Madison Square

Garden).

In the Case of Union Station, there was no such substitute; the station was itself designed

to replace two smaller rail houses and serve all the District's rail-transit needs. Though 95% of

D.C. commuters arrived by car and airplane by the early 1980s, the city was not comfortable

abandoning the remaining 5%, which in actuality amounted to hundreds of thousands of

people.[127] D.C. was not the only city that balked at the prospect of losing rail connectivity;

looking at the data presented in Figure 4, we can see how rarely stations will strip themselves of

their last remaining station. Jacksonville, Detroit, and Omaha all made sure to erect temporary

Amshack-style stations before disbanding their larger terminals. Oakland, Phoenix, and Wichita

chose instead to rely on stations in neighboring cities (Emeryville, Maricopa, and Newton,

respectively) rather than put up the expense of stations all their own. This means that, in the

history of postwar train stations, only Columbus, Nashville, Tulsa, Miami, and Louisville had

single stations that they either destroyed or converted to services unrelated to passenger rail. It

should be remembered, however, that Miami is currently in the midst of completing a brand new,

intermodal transportation center set to be a hub in Florida's expanding railway system.[128]

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[126] Stern, Robert A. M., Gregory Gilmartin, and John Montague. Massengale. *New York 1900: Metropolitan Architecture and Urbanism, 1890-1915*. New York: Rizzoli, 1983: p. 40-41. Print.
[127] Rep. Kenneth Gray, testimony before the Senate Subcommittee on Surface Transportation, "Replacement Rail Terminal for Union Station," 1974.
[128]"Miami Central Station"

Even so, the fact that four major U.S. cities would cast aside railway service is a bit hard to believe. These results indicate that, while unlikely, taking such action is not unheard of and railway stations are not as sacred to developers as they may be to some readers (and writers) of this paper. It may be conceded that converting or neglecting an old railway station does not necessitate the removal of all existing railway infrastructure. In this way, stations that throw off their ties to the rails may easily get them back when market conditions improve – a period of hibernation, after which stations spring back to their original purposes. Also, the temporary nature of America's Amshacks indicates that cities may still be holding out hope for the day rail passengers return in droves. As we have noted previously, that day of reckoning may soon be upon us; between 2003 and 2013, intercity rail traffic at Detroit's New Central Station (the diminutive Woodward Avenue facility put up to replace Michigan Central) has increased over 37%.[129] Such increases won't be sustainable for long, and Detroit will be forced to find a bigger facility. Perhaps their hunt for real estate will take them over near Corktown?

◊

Analyzing this hard data, we see that a few of our correlative setups indicate further study may be warranted. Particularly our studies of income, architectural style, and city government structure point to possible causal relationships that might be better ascertained through new experimentation. When these conclusions are combined with those of the earlier case studies, as well as the case studies surrounding access to amenities and substitute stations, we have enough theoretical ammunition to move onto our general summations.

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[129] Vantuono, William. "For Amtrak, another Record-Ridership Year." *Railway Age*. Simmons-Boardman Publishing Inc., 14 Oct. 2013. Web. 30 Nov. 2013.
"Amtrak: America's Railroad." *Amtrak*. National Railroad Passenger Corporation. Web. 7 Dec. 2013.
Further data sourced from Amtrak's state Fact Sheets, fiscal years 2003-2013

Chapter Seven:

CONCLUSIONS

When pooling together the results of my quantitative analyses, I am compelled to make a few inferences. First is that railway stations are not governed by large-n, systemic forces to the degree that they are often made out to be. While it might be easy to say that Station X fell to the bulldozer because it simply wasn't profitable enough, or because people were moving away from the surrounding area, we now know that the reasons behind such decline are more complex. Even in this thesis I have posited these kinds of glib assumptions which, as we know can see, are disingenuous to the forces actually working to preserve railway stations around the country. Indeed, while my research is largely inconclusive in its attempts to tie stations' transformation to systemic change, it speaks to the importance of the human element in the overall equation. "All politics are local," and as such we should be looking at train stations from the grassroots up rather than by dropping theory from the sky. By working the many valves and levers afforded to them by sprawling, interconnected railway bureaucracies, conscious citizens can find their works-gumming efforts to be surprisingly successful when they are able to overcome initial problems with collective action.

History shows conservationists often get more with vinegar than honey. In 1963, for instance, the protests of AGBANY – small but belligerent intelligentsia of architects, columnists, and social activists angered at the plans to destroy Penn Station – coerced New York Mayor Robert Wagner to begrudgingly form a commission on preservation that would serve to protect

other New York Landmarks in the future.[130] Thus, even though AGBANY failed to preserve

Penn Station, its members were able to place further institutional checks on powers that otherwise

could have run roughshod over historic structures for years to come. There is no institution more

powerful in this regard than the NRHP, and all preservation efforts ought to start there. Of all the

stations sampled for this research, only one was destroyed *after* being inducted into the NRHP.

This shows the NRHP is not omnipotent in terms of what it can protect, but even so, the agency

has indisputably achieved a remarkable track record defending those that join its ranks. Of these

eighty stations I study, not one was destroyed after 1984, because by that point the NRHP had

made demolition an antiquated and ineffectual practice. [131] Preservationists must take advantage

of this potentially fleeting legal sanctuary.

After seeking such institutional protection, these preservationists should know what they

are up against when deciding to fight a particular building's reuse. Though my statistical research

is in many ways inconclusive, it *does* indicate that stations are actually more endangered in times

of urban growth, not urban decline. High density, high profit urban landscapes compel train

stations to work even harder, lest they be replaced with even more productive structures. My

research also shows that as the economy grows and people attain more wealth, they become more

passive toward train stations and do not interfere when demolition plans are made public. So

long as people have other means of transport, and so long as *substitute stations* remain connected

to the national rail network, the loss of a single train station is not likely to produce mass civil

outcry. But as cars and airplanes become less popular and trains become more so, there is good

reason to believe this ignorance will reverse direction. People are already retuning themselves to

the age, size, and architectural majesty of these buildings, as the newfound prominence of

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[130] "Action Group for Better Architecture in New York." *New York Preservation Archive Project*. The New York Preservation Archive Project. Web. 07 Dec. 2013.

[131] Figure 3

Michigan Central station seems to suggest. The mission now is how to convert renewed interest into renewed action.

As Bertolini informs us, the primary way to do this is to ensure that stations aren't just successful transit nodes, but also public places. Expanding access to amenities will make train stations more sought after by urban residents, who in their use of amenities will be more likely to familiarize themselves with the colossal station in their midst. Stations around the country are already taking on mixed-use designs to provide themselves with basic in-house diversity, but Jacobs contends that we must make sure the areas surrounding these buildings are equally open to mixed uses at all hours of the day. Kolson says attempts at revitalization should not be too hasty, for overzealous Big Plans might collapse the only good things these stations have going for them: their history, their grandeur, and their places in our American culture. To this end, Richards and Mackenzie illustrate how no matter what we do, train stations will still be special buildings; every society needs a public square. But when we allow such sentimentality to exist for its own sake rather than for the sake of the buildings which need our help – our *action* – these monuments are reduced to rubble and we are left wondering what we could have done.

I conclude with this: all stations are important, and all deserve our careful consideration. While the costs of keeping up these stations may be high, it is a small price to pay for the retention of our history. Though it is difficult to measure in physical terms, this history has value. Look at any one of the world's great architectural wonders and the story will be the same. The Leaning Tower of Pisa, for instance, is both old and infamous in its poor construction, but rather than tearing the Tower down, Italian engineers have taken to reinforcing and preserving its dilapidated state.[132] Why would a rationally-minded public allow such waste? The reason is simple: people have found sentimental value in the old structure surpassing the costs required in

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[132] Rome, Malcolm Moore in. "Leaning Tower of Pisa 'saved' for 300 Years." *The Telegraph*. Telegraph Media Group, 28 May 2008. Web. 18 Mar. 2014.

its upkeep. The struggle for America's railway stations is very much the same. Though many were built to illogical extremes, urban decision-makers have a responsibility to instill value when none can be found, not to tear down any and every structure seemingly past its prime. Our cultural identity is made immortal by our built works that will be around to tell our stories for far longer than we can ourselves. Buildings, unlike the people that built them, age only so far as we allow them. They do not die, they only sleep.

City	Station	Style	Year Built	Year Changed	NRHP Member	FRA Region	Gov. Type	Status Code
Atlanta, GA	Peachtree Station	Renaissance	1918	1996	1976	3	1	1
Atlanta, GA	Terminal Station	Beaux Arts	1905	1972	n/a	3	1	4
Atlanta, GA	Union Station	Neoclassical	1930	1971	n/a	3	1	4
Baltimore, MD	Pennsylvania Station	Beaux Arts	1911	1984	1975	2	1	1
Baltimore, MD	Camden Station	Renaissance	1865	2005	n/a	2	1	1
Baltimore, MD	President Street Station	Neoclassical	1852	1997	1992	2	1	3
Baltimore, MD	Mount Royal Station	Renaissance	1896	1967	1973	2	1	3
Baltimore, MD	Mount Clare Station	Georgian	1851	1953	1966	2	1	3
Boston, MA	North Station	Renaissance	1898	1995	n/a	1	1	2
Boston, MA	South Station	Neoclassical	1898	1989	1975	1	1	1
Chicago, IL	Chicago and North Western Terminal	Renaissance	1911	1984	n/a	4	1	2
Chicago, IL	LaSalle Street Station	Neoclassical	1903	1981	n/a	4	1	4
Chicago, IL	Dearborn Station	Romanesque	1883	1986	1986	4	1	3
Chicago, IL	Grand Central Station	Romanesque	1890	1971	n/a	4	1	4
Chicago, IL	Central Station	Romanesque	1893	1974	n/a	4	1	4
Chicago, IL	Union Station	Beaux Arts	1925	1969	n/a	4	1	1
Cleveland, OH	Union Terminal	Beaux Arts	1930	1991	1976	2	1	3
Cleveland, OH	Cleveland Union Depot	n/a	1865	1959	n/a	2	1	4
Cleveland, OH	Cleveland Terminal and Valley Station	Romanesque	1898	n/a	n/a	2	1	5
Colorado Springs, CO	Atchison, Topeka & Santa Fe Station	Jacobean revival	1918	1972	1979	6	1	3
Colorado Springs, CO	Denver & Rio Grande Station	Queen Anne	1877	1973	n/a	6	1	3
Columbus, OH	Union Station	Beaux Arts	1897	1979	1974	2	1	4
Dallas, TX	Union Station	Beaux Arts	1916	1950	1975	5	3	1
Denver, CO	Union Station	Beaux Arts	1914	2014	1974	6	1	1
Denver, CO	Moffat Station	Georgian revival	1905	n/a	1976	6	1	5
Detroit, MI	Michigan Central Rail Depot	Romanesque	1884	1966	n/a	4	1	4
Detroit, MI	Michigan Central Station	Beaux Arts	1913	n/a	1975	4	1	5
El Paso, TX	Union Station	Neoclassical	1906	1982	1971	5	3	1
Fort Worth, TX	Texas & Pacific Station	Art Deco	1931	1999	1978	5	3	1
Fort Worth, TX	Union Depot	Beaux Arts	1900	1999	1970	5	3	3
Fresno, CA	Santa Fe Passenger Depot	Mission revival	1899	2005	1976	7	1	1
Houston, TX	Union Station	Neoclassical	1911	1974	1977	5	1	3
Houston, TX	Southern Pacific Station	n/a	1934	1960	n/a	5	1	4
Houston, TX	MKT Railroad Depot	n/a	1914	1958	n/a	5	1	4
Houston, TX	Grand Central Station	Art Deco	1933	1960	n/a	5	1	2
Indianapolis, IN	Union Station	Romanesque	1888	1986	1974	4	1	1
Jacksonville, FL	Union Terminal	Beaux Arts	1919	1986	n/a	3	1	3
Kansas City, MO	Union Station	Beaux Arts	1914	1999	1972	6	3	1
Los Angeles, CA	Union Passenger Terminal	Mission revival	1939	1990	1980	7	1	1

Government Type Key: 1 = Strong Mayor-Council   2 = Weak Mayor-Council   3 = Council-Manager   4 = Other

TABLE 1A

City	Station	Style	Year Built	Year Changed	NRHP Member	FRA Region	Gov. Type	Status Code
Louisville, KT	Union Station	Romanesque	1889	1980	1975	3	4	3
Memphis, TN	Memphis Central Station	Neoclassical	1914	1999	n/a	3	1	1
Memphis, TN	Memphis Union Station	Beaux Arts	1912	1969	n/a	3	1	4
Miami, FL	Florida East Coast Station	n/a	1912	1963	n/a	3	1	4
Milwaukee, WI	Lake Front Depot	Romanesque	1890	1968	n/a	4	2	4
Milwaukee, WI	Everett Street Depot	Gothic revival	1886	1966	n/a	4	2	3
Minneapolis-St. Paul, MN	Great Northern Depot	Beaux Arts	1913	1978	n/a	4	2	4
Minneapolis-St. Paul, MN	St. Paul Union Depot	Neoclassical	1923	2012	1974	4	2	1
Minneapolis-St. Paul, MN	Chicago, Milwaukee & St. Paul Station	Renaissance	1899	2001	1978	4	2	3
Nashville-Davidson, TN	Union Station	Romanesque	1900	1986	1969	3	1	3
New York, NY	East 180th Street Station (Bronx)	Renaissance	1912	2013	n/a	1	1	3
New York, NY	Grand Central Terminal	Beaux Arts	1913	1994	1975	1	1	1
New York, NY	Pennsylvania Station (Manhattan)	Beaux Arts	1910	1964	n/a	1	1	2
Oakland, CA	Southern Pacific 16th Street Station	Beaux Arts	1912	2002	n/a	7	2	5
Oakland, CA	Western Pacific Station	Neoclassical	1910	1974	n/a	7	2	3
Oklahoma City, OK	Santa Fe Station	Art Deco	1934	1999	n/a	5	3	1
Oklahoma City, OK	Union Station	Mission revival	1931	1967	1979	5	3	3
Omaha, NE	Union Station	Art Deco	1931	1971	1971	6	1	3
Omaha, NE	Burlington Station	Neoclassical	1930	2015	1974	6	1	3
Philadelphia, PA	Suburban Station	Art Deco	1930	2007	1985	2	1	1
Philadelphia, PA	Reading Terminal	Renaissance	1893	1997	1972	2	1	3
Philadelphia, PA	North Philadelphia Station	Renaissance	1901	1999	1999	2	1	1
Philadelphia, PA	30th Street Station	Neoclassical	1933	1991	1978	2	1	1
Phoenix, AZ	Union Station	Mission revival	1923	1996	1985	7	3	5
Portland, OR	Union Station	Romanesque	1896	1996	1975	8	4	1
Raleigh, NC	Seaboard Air Line Station	Colonial revival	1942	1986	n/a	3	2	3
Raleigh, NC	Union Station	n/a	1890	1950	2002	3	2	2
Sacramento, CA	Western Pacific Station	Mission revival	1909	1978	n/a	7	2	3
Sacramento, CA	Southern Pacific Station	Renaissance	1926	n/a	1975	7	2	1
San Antonio, TX	Sunset Station	Mission revival	1903	1998	1975	5	3	1
San Antonio, TX	KATY Depot	Mission revival	1917	1969	n/a	5	3	4
San Antonio, TX	MOPAC Station	Mission revival	1908	1970	1975	5	3	3
San Diego, CA	Union Station	Mission revival	1915	n/a	1972	7	1	1
San Jose, CA	Diridon Station	Renaissance	1935	1994	1993	7	3	1
Seattle, WA	King Street Station	Romanesque	1906	2013	1973	8	1	1
Seattle, WA	Union Station	Beaux Arts	1911	2000	1974	8	1	3
Tucson, AZ	Southern Pacific Station	Mission revival	1907	2004	n/a	7	2	1
Tulsa, OK	Union Depot	Art Deco	1931	1983	n/a	5	1	3
Washington, DC	Union Station	Beaux Arts	1907	1988	1969	2	1	1

Government Type Key: 1 = Strong Mayor-Council   2 = Weak Mayor-Council   3 = Council-Manager   4 = Other

TABLE 1B

City	Station	H1 MHI (Metro.)	H2 MHI (Metro.)	H MHI Change (Metro.)	2000 MHI (Metro.)	2010 MHI (Metro.)	MHI Change (Metro.)	Status Code
Atlanta, GA	Peachtree Station	64,256.56	70,276.71	9.37%	70,276.71	56,816.23	-19.15%	1
Atlanta, GA	Terminal Station	38,571.70	64,213.28	66.48%	70,276.71	56,816.23	-19.15%	4
Atlanta, GA	Union Station	38,571.70	64,213.28	66.48%	70,276.71	56,816.23	-19.15%	4
Baltimore, MD	Pennsylvania Station	63,504.80	53,597.07	-15.60%	67,557.53	69,240.97	2.49%	1
Baltimore, MD	Camden Station	67,557.53	69,240.97	2.49%	67,557.53	69,240.97	2.49%	1
Baltimore, MD	President Street. Station	65,145.97	67,557.53	3.70%	67,557.53	69,240.97	2.49%	3
Baltimore, MD	Mount Royal Station	41,940.13	63,504.80	51.42%	67,557.53	69,240.97	2.49%	3
Baltimore, MD	Mount Clare Station	n/a	28,273.83	n/a	67,557.53	69,240.97	2.49%	3
Boston, MA	North Station	72,482.24	75,118.23	3.64%	71,418.50	72,668.19	1.75%	2
Boston, MA	South Station	53,614.04	72,482.24	35.19%	71,418.50	72,668.19	1.75%	1
Chicago, IL	Chicago and North Western Terminal	61,493.44	58,595.47	-4.71%	69,056.46	61,006.24	-11.66%	2
Chicago, IL	LaSalle Street. Station	61,493.44	58,595.47	-4.71%	69,056.46	61,006.24	-11.66%	4
Chicago, IL	Dearborn Station	58,595.47	64,019.51	9.26%	69,056.46	61,006.24	-11.66%	3
Chicago, IL	Grand Central Station	48,810.79	61,493.44	25.98%	69,056.46	61,006.24	-11.66%	4
Chicago, IL	Central Station	48,810.79	61,493.44	25.98%	69,056.46	61,006.24	-11.66%	4
Chicago, IL	Union Station	48,810.79	61,493.44	25.98%	69,056.46	61,006.24	-11.66%	1
Cleveland, OH	Union Terminal	53,984.39	54,063.13	0.15%	57,109.64	49,390.23	-13.52%	3
Cleveland, OH	Cleveland Union Depot	33,416.28	48,070.99	43.86%	57,109.64	49,390.23	-13.52%	4
Cleveland, OH	Cleveland Terminal and Valley Station	n/a	n/a	n/a	57,109.64	49,390.23	-13.52%	5
Colorado Springs, CO	Atchison, Topeka & Santa Fe Station	33,424.61	53,880.31	61.20%	63,371.88	55,214.79	-12.87%	3
Colorado Springs, CO	Denver & Rio Grande Station	33,424.61	53,880.31	61.20%	63,371.88	55,214.79	-12.87%	3
Columbus, OH	Union Station	62,802.33	65,172.71	0.15%	60,582.35	54,526.78	-10.00%	4
Dallas, TX	Union Station	n/a	29,404.78	n/a	64,148.40	58,169.81	-9.32%	1
Denver, CO	Union Station	69,113.28	62,745.49	-9.21%	69,113.28	62,745.49	-9.21%	1
Denver, CO	Moffat Station	n/a	n/a	n/a	69,113.28	62,745.49	-9.21%	5
Detroit, MI	Michigan Central Rail Depot	53,713.90	73,111.27	36.11%	66,505.03	51,491.64	-22.57%	4
Detroit, MI	Michigan Central Station	n/a	n/a	n/a	66,505.03	51,491.64	-22.57%	5
El Paso, TX	Union Station	46,783.53	39,585.73	-15.39%	42,006.67	38,476.11	-8.40%	1
Fort Worth, TX	Texas & Pacific Station	58,506.61	64,148.40	9.64%	64,148.40	58,169.81	-9.32%	1
Fort Worth, TX	Union Depot	58,506.61	64,148.40	9.64%	64,148.40	58,169.81	-9.32%	3
Fresno, CA	Santa Fe Passenger Depot	47,294.87	48,311.21	2.15%	47,294.87	48,311.21	2.15%	1
Houston, TX	Union Station	41,790.60	61,187.24	46.41%	60,553.94	57,628.16	-4.83%	3
Houston, TX	Southern Pacific Station	28,389.82	41,790.60	47.20%	60,553.94	57,628.16	-4.83%	4
Houston, TX	MKT Railroad Depot	28,389.82	41,790.60	47.20%	60,553.94	57,628.16	-4.83%	4
Houston, TX	Grand Central Station	28,389.82	41,790.60	47.20%	60,553.94	57,628.16	-4.83%	2
Indianapolis, IN	Union Station	52,794.16	56,421.22	6.87%	61,618.61	52,206.36	-15.28%	1
Jacksonville, FL	Union Terminal	43,068.77	52,605.15	22.14%	57,412.67	53,762.92	-6.36%	3
Kansas City, MO	Union Station	56,346.36	62,491.19	10.91%	62,491.19	57,603.59	-7.82%	1
Los Angeles, CA	Union Passenger Terminal	49,619.28	65,432.93	31.87%	62,098.87	60,565.02	-2.47%	1

H2 = Year of United States Census closest to Year Changed

H1 = Year of decennial Census preceding H2

All measures of income in 2013 US Dollars

TABLE 2A

City	Station	H1 MHI (Metro.)	H2 MHI (Metro.)	H MHI Change (Metro.)	2000 MHI (Metro.)	2010 MHI (Metro.)	MHI Change (Metro.)	Status Code
Louisville, KT	Union Station	58,923.71	47,821.21	-18.84%	55,223.80	47,731.10	-13.57%	3
Memphis, TN	Memphis Central Station	48,113.55	54,385.04	13.03%	54,385.04	48,477.87	-10.86%	1
Memphis, TN	Memphis Union Station	31,071.43	51,286.56	65.06%	54,385.04	48,477.87	-10.86%	4
Miami, FL	Florida East Coast Station	24,165.66	33,684.32	39.39%	52,262.46	48,451.16	-7.29%	4
Milwaukee, WI	Lake Front Depot	48,566.81	68,073.88	40.17%	62,408.67	53,175.34	-14.79%	4
Milwaukee, WI	Everett Street Depot	48,566.81	68,073.88	40.17%	62,408.67	53,175.34	-14.79%	3
Minneapolis-St. Paul, MN	Great Northern Depot	70,139.27	58,519.14	-16.57%	73,463.98	66,612.86	-9.33%	4
Minneapolis-St. Paul, MN	St. Paul Union Depot	73,463.98	66,612.86	-9.33%	73,463.98	66,612.86	-9.33%	1
Minneapolis-St. Paul, MN	Chicago, Milwaukee & St. Paul Station	65,172.71	73,463.98	12.72%	73,463.98	66,612.86	-9.33%	3
Nashville-Davidson, TN	Union Station	47,366.04	63,803.84	34.70%	59,826.12	51,253.40	-14.33%	3
New York, NY	East 180th Street Station	68,676.32	66,158.82	-3.67%	68,676.32	66,158.82	-3.67%	3
New York, NY	Grand Central Terminal	44,160.05	68,523.58	55.17%	68,676.32	66,158.82	-3.67%	1
New York, NY	Pennsylvania Station	31,328.37	45,064.59	43.85%	68,676.32	66,158.82	-3.67%	2
Oakland, CA	Southern Pacific 16th Street Station	73,895.67	83,907.81	13.55%	83,907.81	78,017.35	-7.02%	5
Oakland, CA	Western Pacific Station	39,649.91	70,859.76	78.71%	83,907.81	78,017.35	-7.02%	3
Oklahoma City, OK	Santa Fe Station	47,915.71	49,780.02	3.89%	49,780.02	49,397.70	-0.77%	1
Oklahoma City, OK	Union Station	37,383.30	56,107.81	50.09%	49,780.02	49,397.70	-0.77%	3
Omaha, NE	Union Station	41,908.65	61,265.29	46.19%	60,851.56	57,754.23	-5.10%	3
Omaha, NE	Burlington Station	n/a	n/a	n/a	60,851.56	57,754.23	-5.10%	3
Philadelphia, PA	Suburban Station	64,297.21	62,064.96	-3.47%	64,297.21	62,064.96	-3.47%	1
Philadelphia, PA	Reading Terminal	63,803.84	64,297.21	0.77%	64,297.21	62,064.96	-3.47%	3
Philadelphia, PA	North Philadelphia Station	63,803.84	64,297.21	0.77%	64,297.21	62,064.96	-3.47%	1
Philadelphia, PA	30th Street Station	50,843.43	63,803.84	25.49%	64,297.21	62,064.96	-3.47%	1
Phoenix, AZ	Union Station	54,891.94	58,286.60	6.18%	60,541.76	53,828.09	-11.09%	5
Portland, OR	Union Station	55,380.31	62,351.85	12.59%	62,351.85	56,705.12	-9.06%	1
Raleigh, NC	Seaboard Air Line Station	48,256.59	74,097.08	53.55%	55,682.40	61,792.53	10.97%	3
Raleigh, NC	Union Station	n/a	19,438.86	n/a	55,682.40	61,792.53	10.97%	2
Sacramento, CA	Western Pacific Station	62,213.93	48,960.55	-21.30%	62,373.49	60,075.72	-3.68%	3
Sacramento, CA	Southern Pacific Station	n/a	n/a	n/a	62,373.49	60,075.72	-3.68%	1
San Antonio, TX	Sunset Station	46,505.85	52,949.69	13.86%	52,949.69	53,657.16	1.34%	1
San Antonio, TX	KATY Depot	29,623.32	47,918.29	61.75%	52,949.69	53,657.16	1.34%	4
San Antonio, TX	MOPAC Station	29,623.32	47,918.29	61.75%	52,949.69	53,657.16	1.34%	3
San Diego, CA	Union Station	n/a	n/a	n/a	63,673.56	64,017.88	0.54%	1
San Jose, CA	Diridon Station	66,067.62	73,895.67	11.85%	83,907.81	89,680.37	6.88%	1
Seattle, WA	King Street Station	68,633.03	67,399.16	-1.80%	68,633.03	67,399.16	-1.80%	1
Seattle, WA	Union Station	62,467.05	68,633.03	9.87%	68,633.03	67,399.16	-1.80%	3
Tucson, AZ	Southern Pacific Station	45,274.22	49,727.26	9.84%	49,727.26	47,299.49	-4.88%	1
Tulsa, OK	Union Depot	55,753.57	48,067.17	-13.79%	51,760.56	47,561.24	-8.11%	3
Washington, DC	Union Station	66,398.40	83,565.08	25.85%	84,167.55	90,298.93	7.28%	1

H2 = Year of United States Census closest to Year Changed

H1 = Year of decennial Census preceding H2

All measures of income in 2013 US Dollars

TABLE 2B

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City	Station	H1 Population (Urban)	H2 Population (Urban)	H Pop. Change (Urban)	H1 Population (Metro)	H2 Population (Metro)	H Pop. Change (Metro)	Status Code
Atlanta, GA	Peachtree Station	394,017	417,963	6.08%	3,068,975	4,112,198	33.99%	1
Atlanta, GA	Terminal Station	487,455	496,973	1.95%	1,017,188	1,390,164	36.67%	4
Atlanta, GA	Union Station	487,455	496,973	1.95%	1,017,188	1,390,164	36.67%	4
Baltimore, MD	Pennsylvania Station	905,759	786,775	-13.14%	2,552,994	2,199,497	-13.85%	1
Baltimore, MD	Camden Station	651,092	620,961	-4.63%	2,553,000	2,710,489	6.17%	1
Baltimore, MD	President Street. Station	736,014	651,092	-11.54%	2,382,172	2,552,994	7.17%	3
Baltimore, MD	Mount Royal Station	939,024	905,759	-3.54%	1,727,023	2,089,438	20.98%	3
Baltimore, MD	Mount Clare Station	859,100	949,708	10.55%	1,083,300	1,337,373	23.45%	3
Boston, MA	North Station	574,283	589,141	2.59%	3,783,817	4,392,340	16.08%	2
Boston, MA	South Station	562,994	574,283	2.01%	3,662,888	3,783,817	3.30%	1
Chicago, IL	Chicago and North Western Terminal	3,366,957	3,005,072	-10.75%	7,778,948	7,937,290	2.04%	2
Chicago, IL	LaSalle Street. Station	3,366,957	3,005,072	-10.75%	7,778,948	7,937,290	2.04%	4
Chicago, IL	Dearborn Station	3,005,072	2,783,911	-7.36%	7,937,290	8,065,633	1.62%	3
Chicago, IL	Grand Central Station	3,550,404	3,366,957	-5.17%	6,220,913	7,778,948	25.05%	4
Chicago, IL	Central Station	3,550,404	3,366,957	-5.17%	6,220,913	7,778,948	25.05%	4
Chicago, IL	Union Station	3,550,404	3,366,957	-5.17%	6,220,913	7,778,948	25.05%	1
Cleveland, OH	Union Terminal	573,822	505,616	-11.87%	2,834,062	2,759,823	-2.62%	3
Cleveland, OH	Cleveland Union Depot	914,808	876,050	-4.24%	1,465,511	1,909,483	30.29%	4
Cleveland, OH	Cleveland Terminal and Valley Station	n/a	n/a	n/a	n/a	n/a	n/a	5
Colorado Springs, CO	Atchison, Topeka & Santa Fe Station	70,194	135,060	92.41%	143,742	235,972	64.16%	3
Colorado Springs, CO	Denver & Rio Grande Station	45,472	70,194	54.37%	143,742	235,972	64.16%	3
Columbus, OH	Union Station	539,677	564,871	4.67%	1,377,419	1,243,827	-9.70%	4
Dallas, TX	Union Station	294,734	434,462		398,564	614,799	54.25%	1
Denver, CO	Union Station	553,594	600,158	8.41%	2,581,506	2,543,482	-1.47%	1
Denver, CO	Moffat Station	n/a	n/a	n/a	n/a	n/a	n/a	5
Detroit, MI	Michigan Central Rail Depot	1,653,402	1,511,336	-9.40%	3,708,539	4,199,931	11.70%	4
Detroit, MI	Michigan Central Station	n/a	n/a	n/a	n/a	n/a	n/a	5
El Paso, TX	Union Station	322,261	425,259	31.96%	359,291	479,899	33.57%	1
Fort Worth, TX	Texas & Pacific Station	447,619	544,052	21.54%	3,885,415	5,221,801	34.39%	1
Fort Worth, TX	Union Depot	447,619	544,052	21.54%	3,885,415	5,221,801	34.39%	3
Fresno, CA	Santa Fe Passenger Depot	429,611	494,665	15.14%	922,516	930,450	0.86%	1
Houston, TX	Union Station	938,219	1,232,802	31.40%	1,418,323	2,169,128	52.94%	3
Houston, TX	Southern Pacific Station	596,163	938,219	57.38%	806,701	1,418,323	75.82%	4
Houston, TX	MKT Railroad Depot	596,163	938,219	57.38%	806,701	1,418,323	75.82%	4
Houston, TX	Grand Central Station	596,163	938,219	57.38%	806,701	1,418,323	75.82%	2
Indianapolis, IN	Union Station	700,807	731,327	4.35%	1,166,575	1,249,822	7.14%	1
Jacksonville, FL	Union Terminal	540,920	635,230	17.44%	722,252	906,727	25.54%	3
Kansas City, MO	Union Station	435,146	441,481	1.46%	1,566,280	1,776,062	13.39%	1
Los Angeles, CA	Union Passenger Terminal	2,966,850	3,485,398	17.48%	11,497,549	14,531,529	26.39%	1

H2 = Year of United States Census closest to Year Changed

H1 = Year of decennial Census preceding H2

TABLE 3A

City	Station	H1 Population (Urban)	H2 Population (Urban)	H Pop. Change (Urban)	H1 Population (Metro)	H2 Population (Metro)	H Pop. Change (Metro)	Status Code
Louisville, KT	Union Station	361,472	298,451	-17.43%	906,752	956,426	5.48%	3
Memphis, TN	Memphis Central Station	610,337	691,210	13.25%	981,747	1,135,614	15.67%	1
Memphis, TN	Memphis Union Station	497,524	623,530	25.32%	674,583	834,103	23.65%	4
Miami, FL	Florida East Coast Station	249,276	291,688	17.01%	495,084	935,047	88.87%	4
Milwaukee, WI	Lake Front Depot	741,324	717,099	-3.27%	1,232,731	1,403,688	13.87%	4
Milwaukee, WI	Everett Street Depot	741,324	717,099	-3.27%	1,232,731	1,403,688	13.87%	3
Minneapolis-St. Paul, MN	Great Northern Depot	434,400	370,951	-14.61%	1,981,951	2,137,133	7.83%	4
Minneapolis-St. Paul, MN	St. Paul Union Depot	382,612	382,578	-0.01%	2,968,806	3,279,833	10.48%	1
Minneapolis-St. Paul, MN	Chicago, Milwaukee & St. Paul Station	368,383	382,612	3.86%	2,464,124	2,968,806	20.48%	3
Nashville-Davidson, TN	Union Station	455,651	488,374	7.18%	850,505	985,026	15.82%	3
New York, NY	East 180th Street Station	8,004,905	8,175,133	2.13%	21,199,855	18,897,109	-10.86%	3
New York, NY	Grand Central Terminal	8,274,961	8,546,846	3.29%	18,829,146	19,480,012	3.46%	1
New York, NY	Pennsylvania Station	7,891,957	7,781,984	-1.39%	9,557,312	10,694,632	11.90%	2
Oakland, CA	Southern Pacific 16th Street Station	397,931	390,724	-1.81%	6,253,311	7,039,362	12.57%	5
Oakland, CA	Western Pacific Station	367,548	361,561	-1.63%	2,648,762	3,109,519	17.40%	3
Oklahoma City, OK	Santa Fe Station	444,724	506,132	13.81%	971,042	1,095,421	12.81%	1
Oklahoma City, OK	Union Station	324,253	366,481	13.02%	511,833	958,839	87.33%	3
Omaha, NE	Union Station	301,598	347,328	15.16%	457,873	555,958	21.42%	3
Omaha, NE	Burlington Station	407,193	408,958	0.43%	716,998	865,350	20.69%	3
Philadelphia, PA	Suburban Station	1,517,313	1,526,006	0.57%	6,188,463	5,965,343	-3.61%	1
Philadelphia, PA	Reading Terminal	1,585,577	1,517,313	0.57%	5,899,345	6,188,463	4.90%	3
Philadelphia, PA	North Philadelphia Station	1,585,577	1,517,313	-4.31%	5,899,345	6,188,463	4.90%	1
Philadelphia, PA	30th Street Station	1,688,210	1,585,577	-6.08%	5,680,509	5,899,345	3.85%	1
Phoenix, AZ	Union Station	983,403	1,322,939	34.53%	2,238,498	3,251,876	45.27%	5
Portland, OR	Union Station	437,319	528,820	20.93%	1,523,741	1,927,881	26.52%	1
Raleigh, NC	Seaboard Air Line Station	150,255	207,951	38.40%	560,744	735,480	31.16%	3
Raleigh, NC	Union Station	46,879	65,679	40.10%	109,544	136,450	24.56%	2
Sacramento, CA	Western Pacific Station	254,413	275,741	8.38%	847,626	1,099,814	29.75%	3
Sacramento, CA	Southern Pacific Station	n/a	n/a	n/a	n/a	n/a	n/a	1
San Antonio, TX	Sunset Station	935,933	1,151,979	23.08%	1,302,099	1,592,383	22.29%	1
San Antonio, TX	KATY Depot	587,718	654,153	11.30%	716,168	888,179	24.02%	4
San Antonio, TX	MOPAC Station	587,718	654,153	11.30%	716,168	888,179	24.02%	3
San Diego, CA	Union Station	n/a	n/a	n/a	n/a	n/a	n/a	1
San Jose, CA	Diridon Station	629,442	782,248	24.28%	5,367,900	6,253,311	16.49%	1
Seattle, WA	King Street Station	563,391	608,660	8.04%	3,554,760	3,439,809	-3.23%	1
Seattle, WA	Union Station	516,259	563,391	9.13%	2,559,136	3,043,885	18.94%	3
Tucson, AZ	Southern Pacific Station	405,390	488,108	20.40%	666,880	843,746	26.52%	1
Tulsa, OK	Union Depot	331,638	360,919	8.83%	525,852	657,173	24.97%	3
Washington, DC	Union Station	638,333	606,900	-4.92%	3,250,921	3,923,574	20.69%	1

H2 = Year of United States Census closest to Year Changed

H1 = Year of decennial Census preceding H2

TABLE 3B

City	Station	2000 Population (Urban)	2010 Population (Urban)	Pop. Change (Urban)	2000 Population (Metro.)	2010 Population (Metro.)	Pop. Change (Metro.)	Status Code
Atlanta, GA	Peachtree Station	416,474	420,003	0.85%	4,247,981	5,268,860	24.03%	1
Atlanta, GA	Terminal Station	416,474	420,003	0.85%	4,247,981	5,268,860	24.03%	4
Atlanta, GA	Union Station	416,474	420,003	0.85%	4,247,981	5,268,860	24.03%	4
Baltimore, MD	Pennsylvania Station	651,154	620,961	-4.64%	2,552,994	2,710,489	6.17%	1
Baltimore, MD	Camden Station	651,154	620,961	-4.64%	2,552,994	2,710,489	6.17%	1
Baltimore, MD	President Street. Station	651,154	620,961	-4.64%	2,552,994	2,710,489	6.17%	3
Baltimore, MD	Mount Royal Station	651,154	620,961	-4.64%	2,552,994	2,710,489	6.17%	3
Baltimore, MD	Mount Clare Station	651,154	620,961	-4.64%	2,552,994	2,710,489	6.17%	3
Boston, MA	North Station	589,141	617,594	-5.15%	4,391,344	4,552,402	3.67%	2
Boston, MA	South Station	589,141	617,594	-5.15%	4,391,344	4,552,402	3.67%	1
Chicago, IL	Chicago and North Western Terminal	2,896,016	2,695,598	-6.92%	9,098,316	9,461,105	3.99%	2
Chicago, IL	LaSalle Street. Station	2,896,016	2,695,598	-6.92%	9,098,316	9,461,105	3.99%	4
Chicago, IL	Dearborn Station	2,896,016	2,695,598	-6.92%	9,098,316	9,461,105	3.99%	3
Chicago, IL	Grand Central Station	2,896,016	2,695,598	-6.92%	9,098,316	9,461,105	3.99%	4
Chicago, IL	Central Station	2,896,016	2,695,598	-6.92%	9,098,316	9,461,105	3.99%	4
Chicago, IL	Union Station	2,896,016	2,695,598	-6.92%	9,098,316	9,461,105	3.99%	1
Cleveland, OH	Union Terminal	478,403	396,815	-17.05%	2,148,143	2,077,240	-3.30%	3
Cleveland, OH	Cleveland Union Depot	478,403	396,815	-17.05%	2,148,143	2,077,240	-3.30%	4
Cleveland, OH	Cleveland Terminal and Valley Station	478,403	396,815	-17.05%	2,148,143	2,077,240	-3.30%	5
Colorado Springs, CO	Atchison, Topeka & Santa Fe Station	360,890	416,427	15.39%	537,484	645,613	20.12%	3
Colorado Springs, CO	Denver & Rio Grande Station	360,890	416,427	15.39%	537,484	645,613	20.12%	3
Columbus, OH	Union Station	711,470	787,033	10.62%	1,612,694	1,836,536	13.88%	4
Dallas, TX	Union Station	1,188,580	1,197,816	0.78%	5,161,544	6,371,773	23.45%	1
Denver, CO	Union Station	554,636	600,158	8.21%	2,179,240	2,543,482	16.71%	1
Denver, CO	Moffat Station	554,636	600,158	8.21%	2,179,240	2,543,482	16.71%	5
Detroit, MI	Michigan Central Rail Depot	951,270	713,777	-24.97%	4,452,557	4,296,250	-3.51%	4
Detroit, MI	Michigan Central Station	951,270	713,777	-24.97%	4,452,557	4,296,250	-3.51%	5
El Paso, TX	Union Station	563,662	649,121	15.16%	679,622	800,647	17.81%	1
Fort Worth, TX	Texas & Pacific Station	534,694	741,206	38.62%	5,161,544	6,371,773	23.45%	1
Fort Worth, TX	Union Depot	534,694	741,206	38.62%	5,161,544	6,371,773	23.45%	3
Fresno, CA	Santa Fe Passenger Depot	427,652	494,665	15.67%	799,407	930,450	16.39%	1
Houston, TX	Union Station	1,953,631	2,099,451	7.46%	4,715,407	5,946,800	26.11%	3
Houston, TX	Southern Pacific Station	1,953,631	2,099,451	7.46%	4,715,407	5,946,800	26.11%	4
Houston, TX	MKT Railroad Depot	1,953,631	2,099,451	7.46%	4,715,407	5,946,800	26.11%	4
Houston, TX	Grand Central Station	1,953,631	2,099,451	7.46%	4,715,407	5,946,800	26.11%	2
Indianapolis, IN	Union Station	781,870	820,445	4.93%	1,525,104	1,756,241	15.16%	1
Jacksonville, FL	Union Terminal	735,617	821,784	11.71%	1,122,750	1,345,596	19.85%	3
Kansas City, MO	Union Station	441,545	459,787	4.13%	1,836,038	2,035,334	10.86%	1
Los Angeles, CA	Union Passenger Terminal	1,223,400	1,307,402	6.87%	12,365,627	12,828,837	3.75%	1

TABLE 4A

City	Station	2000 Population (Urban)	2010 Population (Urban)	Pop. Change (Urban)	2000 Population (Metro.)	2010 Population (Metro.)	Pop. Change (Metro.)	Status Code
Louisville, KT	Union Station	n/a	n/a	n/a	1,161,975	1,283,566	10.46%	3
Memphis, TN	Memphis Central Station	650,100	646,889	-0.49%	1,205,204	1,316,100	9.20%	1
Memphis, TN	Memphis Union Station	650,100	646,889	-0.49%	1,205,204	1,316,100	9.20%	4
Miami, FL	Florida East Coast Station	362,470	399,457	10.20%	5,007,564	5,564,635	11.12%	4
Milwaukee, WI	Lake Front Depot	596,974	594,833	-0.36%	1,500,741	1,555,908	3.68%	4
Milwaukee, WI	Everett Street Depot	596,974	594,833	-0.36%	1,500,741	1,555,908	3.68%	3
Minneapolis-St. Paul, MN	Great Northern Depot	382,618	382,578	-0.01%	2,968,806	3,279,833	10.48%	4
Minneapolis-St. Paul, MN	St. Paul Union Depot	382,618	382,578	-0.01%	2,968,806	3,279,833	10.48%	1
Minneapolis-St. Paul, MN	Chicago, Milwaukee & St. Paul Station	382,618	382,578	-0.01%	2,968,806	3,279,833	10.48%	3
Nashville-Davidson, TN	Union Station	545,524	601,222	10.21%	1,311,789	1,589,934	21.20%	3
New York, NY	East 180th Street Station	8,008,278	8,175,133	2.08%	18,323,002	18,897,109	3.13%	3
New York, NY	Grand Central Terminal	8,008,278	8,175,133	2.08%	18,323,002	18,897,109	3.13%	1
New York, NY	Pennsylvania Station	8,008,278	8,175,133	2.08%	18,323,002	18,897,109	3.13%	2
Oakland, CA	Southern Pacific 16th Street Station	399,484	390,724	-2.19%	4,123,740	4,335,391	5.13%	5
Oakland, CA	Western Pacific Station	399,484	390,724	-2.19%	4,123,740	4,335,391	5.13%	3
Oklahoma City, OK	Santa Fe Station	506,132	579,999	14.59%	1,095,421	1,252,987	14.38%	1
Oklahoma City, OK	Union Station	506,132	579,999	14.59%	1,095,421	1,252,987	14.38%	3
Omaha, NE	Union Station	390,007	408,958	4.86%	767,041	865,350	12.82%	3
Omaha, NE	Burlington Station	390,007	408,958	4.86%	767,041	865,350	12.82%	3
Philadelphia, PA	Suburban Station	1,517,550	1,526,006	0.56%	5,687,147	5,965,343	4.89%	1
Philadelphia, PA	Reading Terminal	1,517,550	1,526,006	0.56%	5,687,147	5,965,343	4.89%	3
Philadelphia, PA	North Philadelphia Station	1,517,550	1,526,006	0.56%	5,687,147	5,965,343	4.89%	1
Philadelphia, PA	30th Street Station	1,517,550	1,526,006	0.56%	5,687,147	5,965,343	4.89%	1
Phoenix, AZ	Union Station	1,321,045	1,445,632	9.43%	3,251,876	4,192,887	28.94%	5
Portland, OR	Union Station	529,121	583,776	10.33%	487,568	514,098	5.44%	1
Raleigh, NC	Seaboard Air Line Station	276,093	403,892	46.29%	797,071	1,130,490	41.83%	3
Raleigh, NC	Union Station	276,093	403,892	46.29%	797,071	1,130,490	41.83%	2
Sacramento, CA	Western Pacific Station	407,018	466,488	14.61%	1,796,857	2,149,127	19.60%	3
Sacramento, CA	Southern Pacific Station	407,018	466,488	14.61%	1,796,857	2,149,127	19.60%	1
San Antonio, TX	Sunset Station	1,144,646	1,327,407	15.97%	1,711,703	2,142,508	25.17%	1
San Antonio, TX	KATY Depot	1,144,646	1,327,407	15.97%	1,711,703	2,142,508	25.17%	4
San Antonio, TX	MOPAC Station	1,144,646	1,327,407	15.97%	1,711,703	2,142,508	25.17%	3
San Diego, CA	Union Station	1,223,400	1,307,402	6.87%	2,813,833	3,095,313	10.00%	1
San Jose, CA	Diridon Station	894,943	945,942	5.70%	1,735,819	1,836,911	5.82%	1
Seattle, WA	King Street Station	563,374	608,660	8.04%	3,043,878	3,439,809	13.01%	1
Seattle, WA	Union Station	563,374	608,660	8.04%	3,043,878	3,439,809	13.01%	3
Tucson, AZ	Southern Pacific Station	486,699	520,116	6.87%	843,746	980,263	16.18%	1
Tulsa, OK	Union Depot	393,049	391,906	-0.29%	859,532	937,478	9.07%	3
Washington, DC	Union Station	572,059	601,723	5.19%	4,796,183	5,582,170	16.30%	1

TABLE 4B

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City	Station	H Density, people/sq. mi. (Urban)	2010 Density, people/sq. mi. (Urban)	H Density people/sq. mi. (Metro.)	2010 Density people/sq. mi. (Metro.)	Status Code
Atlanta, GA	Peachtree Station	2,161	1,707	507	632	1
Atlanta, GA	Terminal Station	3,779	1,707	329	632	4
Atlanta, GA	Union Station	3,779	1,707	329	632	4
Baltimore, MD	Pennsylvania Station	9,793	3,073	843	1,042	1
Baltimore, MD	Camden Station	3,073	3,073	873	1,042	1
Baltimore, MD	President Street. Station	8,058	3,073	979	1,042	3
Baltimore, MD	Mount Royal Station	11,568	3,073	801	1,042	3
Baltimore, MD	Mount Clare Station	12,067	3,073	1,209	1,042	3
Boston, MA	North Station	3,114	2,232	1,180	1,305	2
Boston, MA	South Station	11,860	2,232	1,501	1,305	1
Chicago, IL	Chicago and North Western Terminal	13,174	3,524	1,413	1,315	2
Chicago, IL	LaSalle Street. Station	13,174	3,524	1,413	1,315	4
Chicago, IL	Dearborn Station	12,251	3,524	1,436	1,315	3
Chicago, IL	Grand Central Station	15,126	3,524	1,384	1,315	4
Chicago, IL	Central Station	15,126	3,524	1,384	1,315	4
Chicago, IL	Union Station	15,126	3,524	1,384	1,315	1
Cleveland, OH	Union Terminal	6,565	2,307	948	1,040	3
Cleveland, OH	Cleveland Union Depot	10,789	2,307	1,257	1,040	4
Cleveland, OH	Cleveland Terminal and Valley Station	n/a	2,307	n/a	1,040	5
Colorado Springs, CO	Atchison, Topeka & Santa Fe Station	2,221	2,978	111	241	3
Colorado Springs, CO	Denver & Rio Grande Station	2,221	2,978	111	241	3
Columbus, OH	Union Station	3,123	2,680	348	463	4
Dallas, TX	Union Station	3,879	2,879	688	714	1
Denver, CO	Union Station	3,554	3,554	303	305	1
Denver, CO	Moffat Station	n/a	3,554	n/a	305	5
Detroit, MI	Michigan Central Rail Depot	5,107	2,793	1,915	1,105	4
Detroit, MI	Michigan Central Station	n/a	2,793	n/a	1,105	5
El Paso, TX	Union Station	1,778	3,205	474	791	1
Fort Worth, TX	Texas & Pacific Station	1,828	2,879	574	714	1
Fort Worth, TX	Union Depot	1,828	2,879	574	714	3
Fresno, CA	Santa Fe Passenger Depot	4,098	3,822	155	156	1
Houston, TX	Union Station	2,841	2,979	305	674	3
Houston, TX	Southern Pacific Station	2,860	2,979	226	674	4
Houston, TX	MKT Railroad Depot	2,860	2,979	226	674	4
Houston, TX	Grand Central Station	2,860	2,979	226	674	2
Indianapolis, IN	Union Station	2,022	2,108	407	456	1
Jacksonville, FL	Union Terminal	837	2,009	344	420	3
Kansas City, MO	Union Station	1,408	2,242	234	260	1
Los Angeles, CA	Union Passenger Terminal	7,426	1,822	428	2,646	1

H2 = Year of United States Census closest to Year Changed

H1 = Year of decennial Census preceding H2

TABLE 5A

76

City	Station	H Density, people/sq. mi. (Urban)	2010 Density, people/sq. mi. (Urban)	H Density people/sq. mi. (Metro.)	2010 Density people/sq. mi. (Metro.)	Status Code
Louisville, KT	Union Station	4,974	2,040	422	312	3
Memphis, TN	Memphis Central Station	2,327	2,132	264	287	1
Memphis, TN	Memphis Union Station	2,868	2,132	362	287	4
Miami, FL	Florida East Coast Station	8,529	4,442	458	1,096	4
Milwaukee, WI	Lake Front Depot	7,548	2,523	878	1,070	4
Milwaukee, WI	Everett Street Depot	7,548	2,523	878	1,070	3
Minneapolis-St. Paul, MN	Great Northern Depot	6,732	2,594	423	544	4
Minneapolis-St. Paul, MN	St. Paul Union Depot	2,594	2,594	515	544	1
Minneapolis-St. Paul, MN	Chicago, Milwaukee & St. Paul Station	6,970	2,594	490	544	3
Nashville-Davidson, TN	Union Station	1,032	1,721	242	279	3
New York, NY	East 180th Street Station	5,319	5,319	2,051	2,826	3
New York, NY	Grand Central Terminal	23,701	5,319	1,916	2,826	1
New York, NY	Pennsylvania Station	24,697	5,319	5,007	2,826	2
Oakland, CA	Southern Pacific 16th Street Station	7,127	6,266	1,668	1,755	5
Oakland, CA	Western Pacific Station	6,771	6,266	645	1,755	3
Oklahoma City, OK	Santa Fe Station	1,212	2,098	176	227	1
Oklahoma City, OK	Union Station	576	2,098	169	227	3
Omaha, NE	Union Station	4,534	2,673	290	199	3
Omaha, NE	Burlington Station	2,673	2,673	196	199	3
Philadelphia, PA	Suburban Station	2,746	2,746	1,225	1,296	1
Philadelphia, PA	Reading Terminal	11,233	2,746	1,228	1,296	3
Philadelphia, PA	North Philadelphia Station	11,233	2,746	1,228	1,296	1
Philadelphia, PA	30th Street Station	11,734	2,746	1,104	1,296	1
Phoenix, AZ	Union Station	2,782	3,165	223	288	5
Portland, OR	Union Station	3,939	3,528	288	333	1
Raleigh, NC	Seaboard Air Line Station	2,395	1,708	365	534	3
Raleigh, NC	Union Station	5,750	1,708	158	534	2
Sacramento, CA	Western Pacific Station	2,869	3,660	216	422	3
Sacramento, CA	Southern Pacific Station	n/a	3,660	n/a	422	1
San Antonio, TX	Sunset Station	2,809	2,945	233	293	1
San Antonio, TX	KATY Depot	3,555	2,945	353	293	4
San Antonio, TX	MOPAC Station	3,555	2,945	353	293	3
San Diego, CA	Union Station	n/a	4,037	n/a	736	1
San Jose, CA	Diridon Station	4,568	5,820	849	686	1
Seattle, WA	King Street Station	3,028	3,028	545	586	1
Seattle, WA	Union Station	6,717	3,028	516	586	3
Tucson, AZ	Southern Pacific Station	2,500	2,385	92	107	1
Tulsa, OK	Union Depot	1,945	1,951	131	150	3
Washington, DC	Union Station	9,883	3,470	989	997	1

H2 = Year of United States Census closest to Year Changed

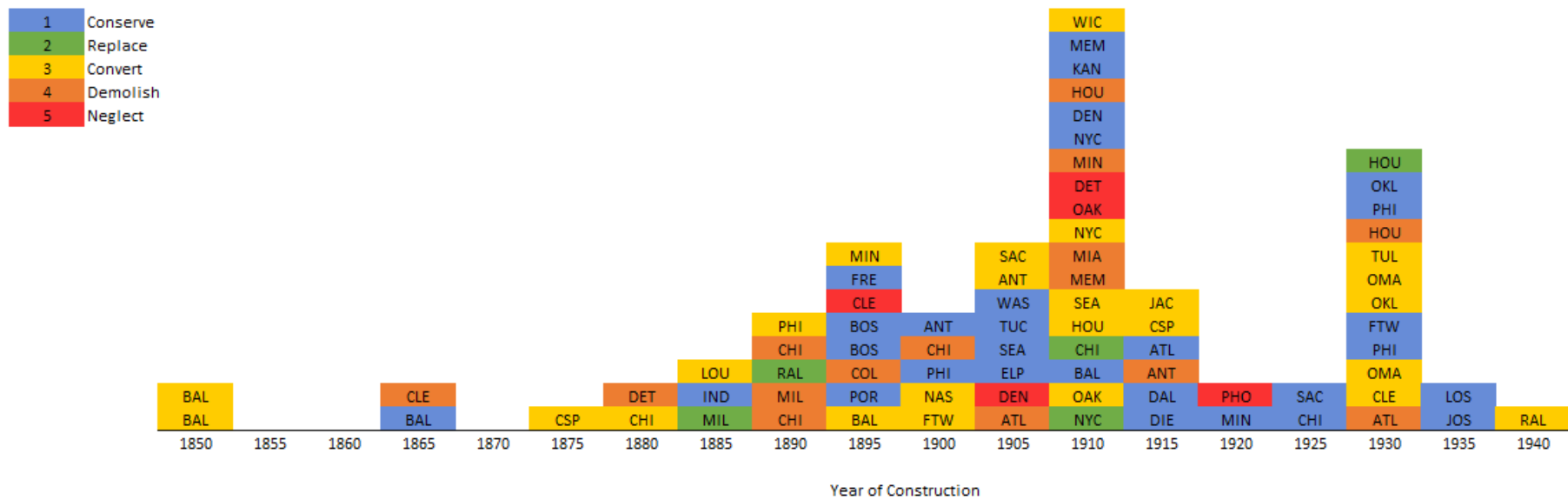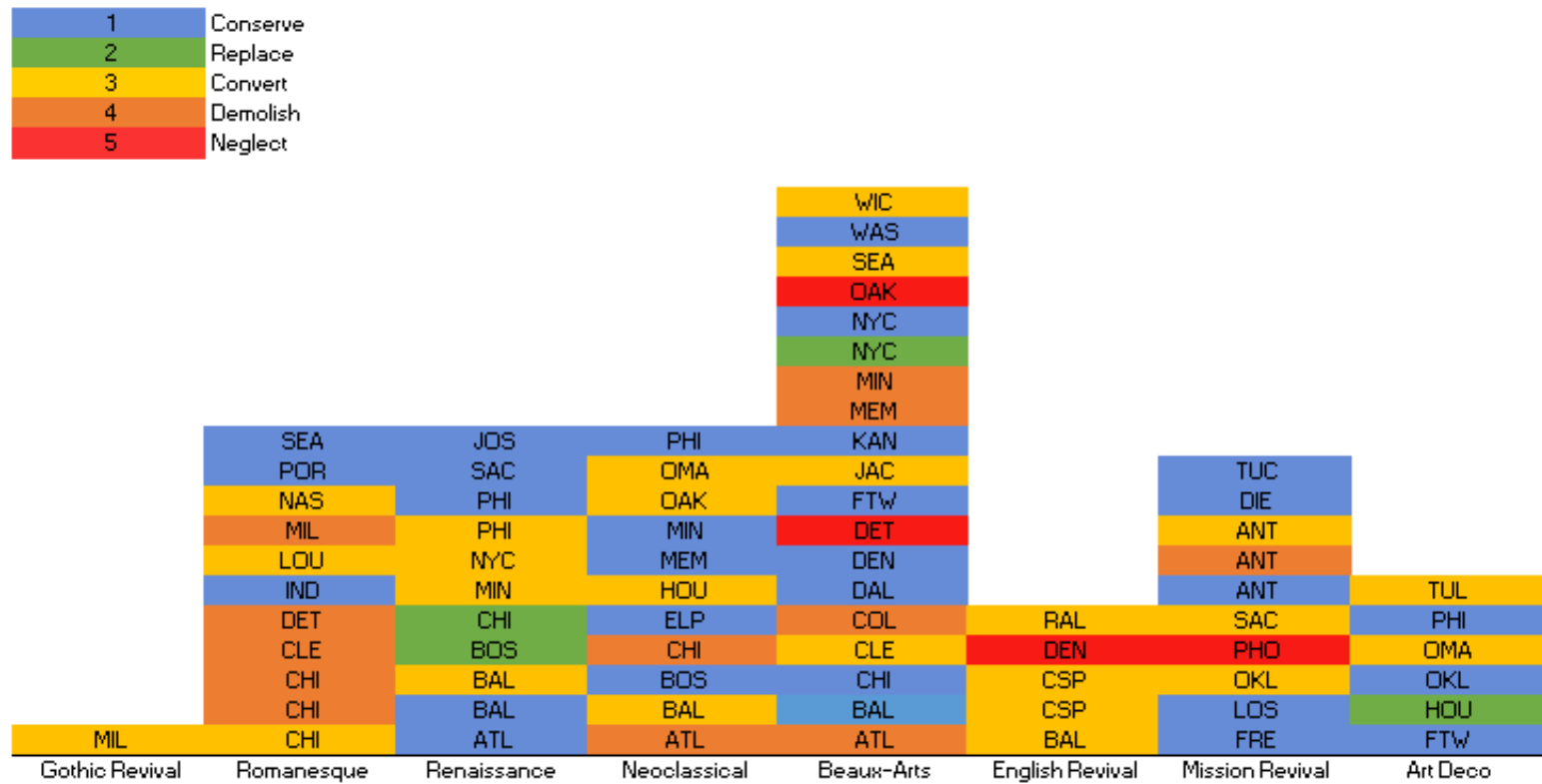H1 = Year of decennial Census preceding H2

TABLE 5B

FIGURE 1

FIGURE 2

79

Legend:
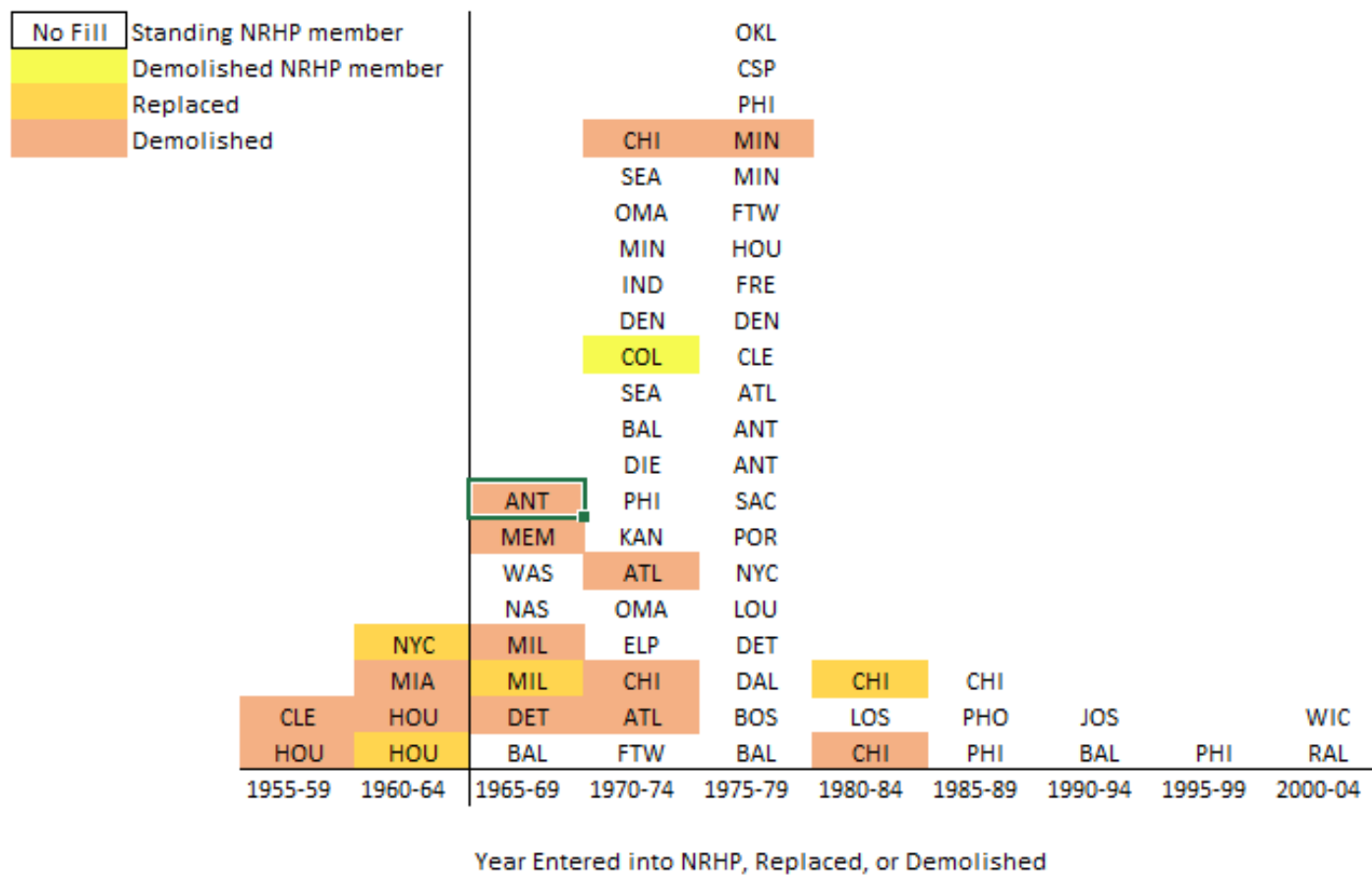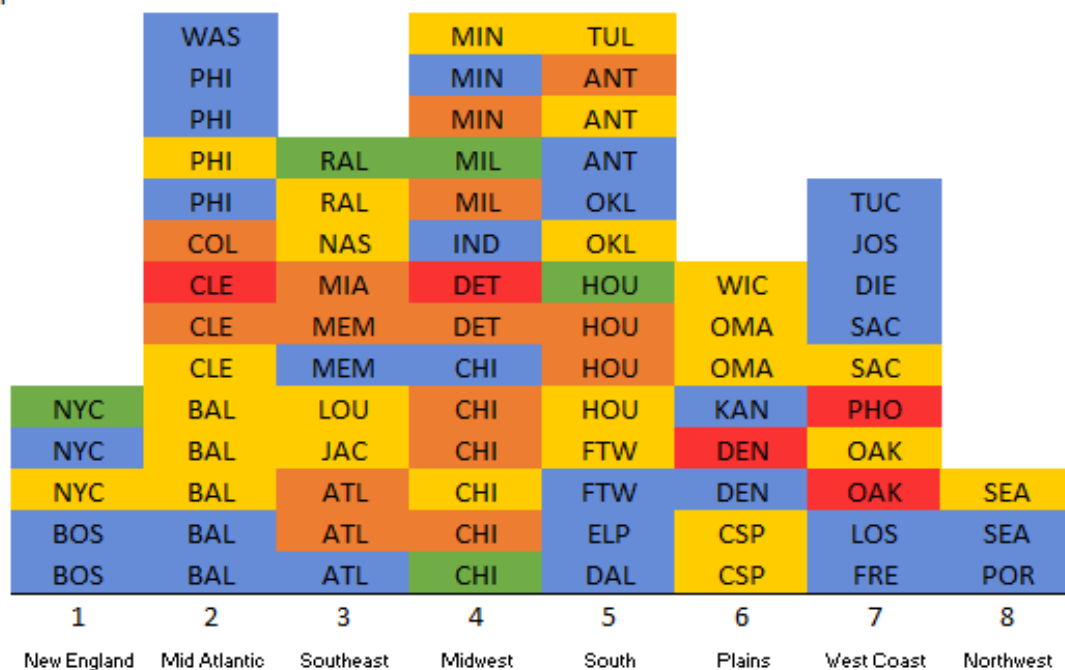
No Fill	Standing NRHP member
(yellow)	Demolished NRHP member
(gold)	Replaced
(orange)	Demolished

1955-59	1960-64	1965-69	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99	2000-04
				OKL					
				CSP					
				PHI					
			CHI	MIN					
			SEA	MIN					
			OMA	FTW					
			MIN	HOU					
			IND	FRE					
			DEN	DEN					
			COL	CLE					
			SEA	ATL					
			BAL	ANT					
			DIE	ANT					
		ANT	PHI	SAC					
		MEM	KAN	POR					
		WAS	ATL	NYC					
		NAS	OMA	LOU					
	NYC	MIL	ELP	DET					
	MIA	MIL	CHI	DAL	CHI	CHI			
CLE	HOU	DET	ATL	BOS	LOS	PHO	JOS		WIC
HOU	HOU	BAL	FTW	BAL	CHI	PHI	BAL	PHI	RAL

Year Entered into NRHP, Replaced, or Demolished

FIGURE 3

FIGURE 4A

81

Regional Offices

REGION 6
Kansas City, MO
800.724.5996

REGION 4
Chicago, IL
800-724-5040

REGION 1
Cambridge, MA
800.724.5991

REGION 8
Vancouver, WA
800.724.5998

REGION 2
Crum Lynne, PA
800.724.5992

REGION 7
Sacramento, CA
800.724.5997

HEADQUARTERS
Washington, DC
202.493.6014

REGION 5
Fort Worth, TX
800.724.5995

REGION 3
Atlanta, GA
800.724.5993

Federal Railroad Administration

FIGURE 4B
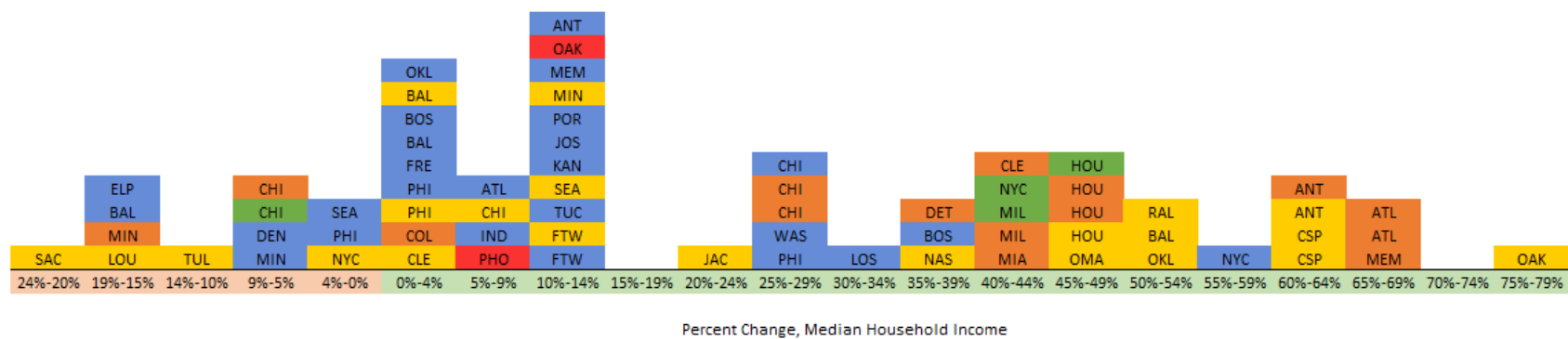
FIGURE 5

FIGURE 6

Percent Change, Urban Population

FIGURE 7

Percent Change, Metropolitan Population

FIGURE 8

86

FIGURE 9

87

Metropolitan Density (people/sq. mi.)

FIGURE 10

88
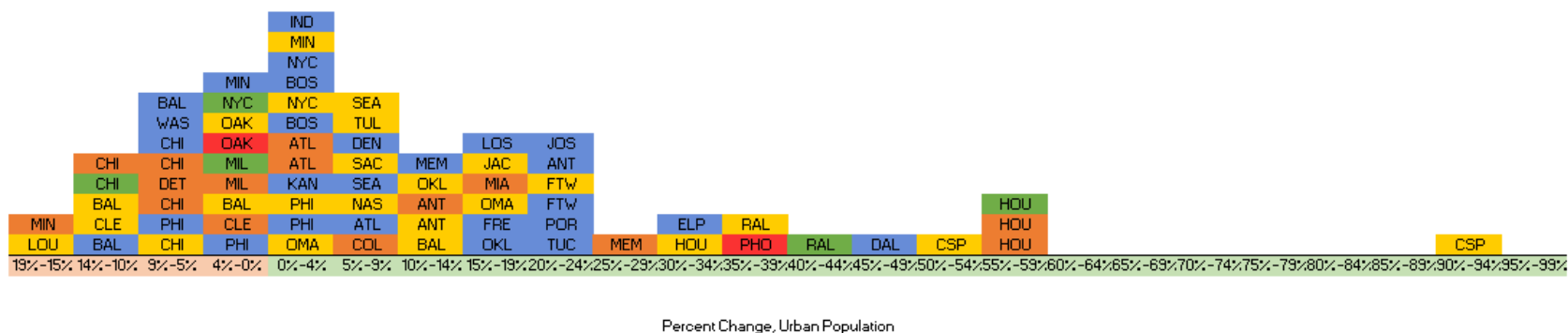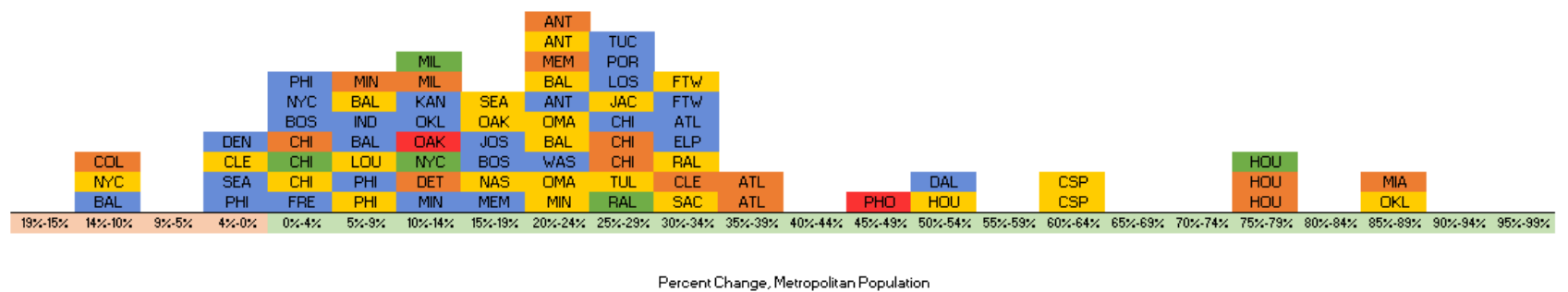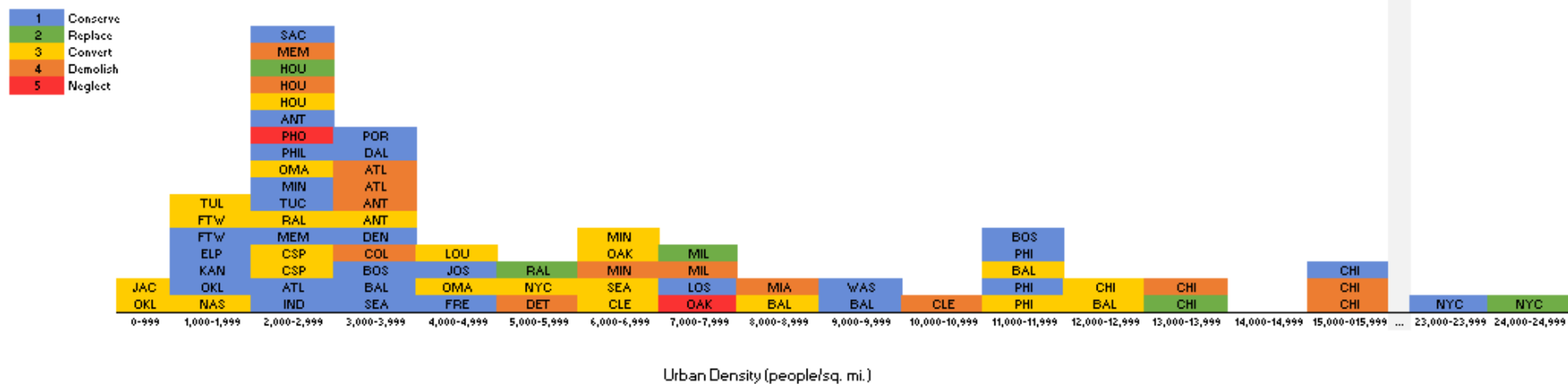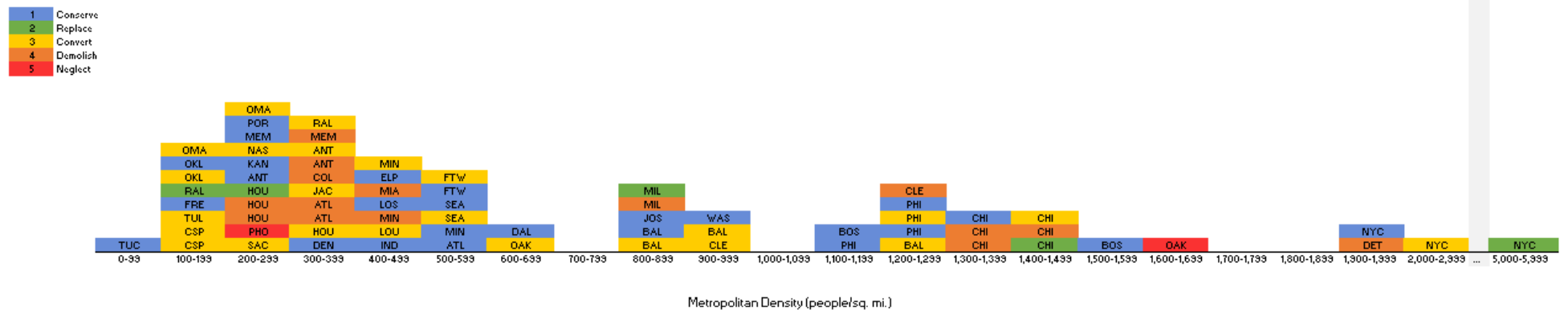
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