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Rochester's Inner Loop Freeway-to-Boulevard Project: A Case Study

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Rochester's Inner Loop Freeway-to-Boulevard Project

A Case Study

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16. Abstract This project is a mixed-methods case study of a completed freeway-to-boulevard project in Rochester, New York. To spatially assess potential benefits to quality of life, I compared the years before and after the project was completed in the area surrounding the Inner Loop East using a combination of census data, air quality estimates, asthma ED-visit rate data, traffic volume data, and bicycle/pedestrian counts. I also interviewed planners, community advocates, and residents about the project. Evidence from the interviews was supplemented with document analysis of news coverage, social media commentary, public meeting notes, and city planning documents. Through this case study, I found that the Rochester Inner Loop East Transformation project succeeded in improving mobility and connectivity and creation of new affordable housing units, but that it likely also contributed to gentrification in the area and displacement of Black and low-income residents. I identified key lessons for future projects to address air quality, traffic, displacement, and community engagement, which aim to inform the EPA Office of Community Revitalization as they begin community engagement and design processes for similar projects in other communities.			
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Disclaimer

This report was prepared in partial fulfillment of the requirements for the Master in Urban and Regional Planning degree in the Department of Urban Planning at the University of California, Los Angeles. It was prepared at the direction of the Department and of Elina Bravve (US EPA) as a planning client. The views expressed herein are those of the authors and not necessarily those of the Department, the UCLA Luskin School of Public Affairs, UCLA as a whole, or the client.

Rochester's Inner Loop Freeway- to-Boulevard Project: A Case Study

UCLA Institute of Transportation Studies

A comprehensive project submitted in partial satisfaction of the requirements for the degree Master of Urban and Regional Planning.

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Executive Summary

Urban freeway removal has been advocated as a path forward from the legacy of discriminatory freeway construction projects. There are examples across the United States and internationally of cities that have removed or capped freeways as an attempt to improve the local urban environment and quality of life (Napolitan & Zegras, 2008). Potential benefits are numerous, including community connectivity, improved air quality, and additional land for uses such as housing, bike lanes, or parks. However, infrastructure projects that create greenspace are often associated with gentrification and displacement (Patterson & Harley, 2019).

This project is a mixed-methods case study of a completed freeway-to-boulevard project in Rochester, New York. In the 1950s, Rochester constructed New York State Route 940T, or the “Inner Loop,” encircling the downtown area, cutting through densely populated residential areas, demolishing homes and businesses, and disproportionately harming Black neighborhoods (Landmark Society, 2021). From 2014-2017, the Inner Loop East Transformation project removed two-thirds of a mile from the eastern section of the Inner Loop freeway and replaced it with an at-grade boulevard lined with bike lanes and trees, and surrounded by mixed-use residential communities (US DOT, n.d.). A second project to continue the teardown and redesign of the Inner Loop is under development.

Map of Rochester Inner Loop East (Source: US DOT, n.d.)



To spatially assess potential benefits to quality of life, I compared the years before and after the project was completed in the census tracts bordering the Inner Loop East using a combination of census data, air quality estimates, asthma ED-visit rate data, traffic volume data, and bicycle/pedestrian counts. I also interviewed planners, community advocates, and residents about the project. Evidence from the

interviews was supplemented with document analysis of news coverage, social media commentary, public meeting notes, and city planning documents.

Through this case study, I found that the Rochester Inner Loop East Transformation project succeeded in improving mobility and connectivity. I also found that it likely contributed to gentrification in the area and displacement of Black and low-income residents. Finally, I identified the following key lessons for future projects to address air quality, traffic, displacement, and community engagement:

1. Boulevards do not necessarily require the same vehicle carrying capacity as the freeway they replace; traffic will reroute and disperse across the grid.
2. To reduce Vehicle Miles Traveled (VMT) and congestion, improvements to alternative transportation modes (i.e., bus service) should be implemented in tandem with freeway removal to support mode shift.
3. Asthma-related emergency department visits increased during project construction years, highlighting the importance of more stringent air pollution mitigation efforts during freeway removal projects.
4. Substantially reducing traffic-related air pollution will require removing freeways with higher traffic volumes.
5. Community engagement around land use should set clear priorities related to housing density and opportunities for ownership, mix of market rate vs. affordable housing, architecture/design standards, public gathering spaces and greenspace, and specific community needs (e.g., grocery store).
6. Gentrification and displacement are a concern even in areas of low residential density.
7. Neighborhood stabilization measures beyond the development of affordable housing are needed to avoid displacement due to increasing rents and property values.

Rochester is one of few cities that have completed this type of freeway-to-boulevard project in recent years, and it is considered a model for other cities pursuing similar projects as federal support increases. The findings from this project aim to inform the EPA Office of Community Revitalization as they begin community engagement and design processes for similar projects in other communities.

Introduction

Rochester, NY is a mid-size city along the northern edge of New York State and Lake Ontario. The city was industrialized during World War II and became home to major manufacturing companies such as Kodak and Western Union Telegraph, causing a population boom. The city, which was 98% white at the time, reached a population of around 330,000 in the 1950s (Rochester 2034 Comprehensive Plan Appendix B: The History of Rochester, 2019). Throughout the 1950s and 60s, tens of thousands of Black people moved to Rochester from the South (Murphy, 2020). Many of them experienced intense housing discrimination and were blocked from moving into white neighborhoods (Murphy, 2020). In order to accommodate the increasing population, automobiles, and suburban access to downtown, Rochester constructed the New York State Route 940T, or the “Inner Loop.”¹ The new freeway encircled the downtown, cutting through densely populated residential areas, demolishing homes and businesses and disproportionately harming Black neighborhoods (Landmark Society, 2021). Around 1,300 homes and businesses were demolished for the project’s construction (US DOT, n.d.).

Figure 1. Rochester Inner Loop Redlining Map (Map created by Adam Susaneck, Segregation by Design)²

The Inner Loop was part of a national trend of urban renewal projects targeting predominantly Black and immigrant communities for displacement in the name of urban revitalization (Cebul, 2020). The map to the right, created as part of the Segregation by Design project, shows how the path of the Inner Loop cut through historically redlined areas (Figure 1).² The blue areas on the map were designated for “slum clearance.”



An urban renewal district was designated in the southeast corner of the Loop, and the existing buildings were demolished in the name of new apartments, retail & office space (Raymond & Magi, 2018). The project ran out of funding and few of these new buildings were ever developed; instead, the land was sold off to developers, with the largest

¹ The creation of an Inner Loop around downtown Rochester was first proposed by Harland Bartholomew, who had been hired in the 1920s to develop a plan for the City (Raymond & Magi, 2018). At the time Harland Bartholomew was a prominent city planner in St. Louis; he is now known for his widespread influence in designing automobile-centric, segregated cities and suburban sprawl (Lens, 2022). His plan for Rochester was adopted by the city in 1929, but was never implemented due to WWII and the Great Depression (Raymond & Magi, 2018). However, in 1951, the City moved forward with a similar plan for the Inner Loop Highway, and construction of the highway was completed in the 1960s (Raymond & Magi, 2018).

² The path of destruction can be seen in a video created by Adam Paul Susaneck, available here: <https://www.whec.com/top-news/news10nbc-investigates-video-shows-how-inner-loop-cut-through-homes-churches-parks/>

parcel becoming the Strong Museum of Play (Raymond & Magi, 2018).

Rochester's population was at its peak when the Inner Loop was constructed (US DOT, n.d.), but later declined due to loss of jobs from the closure of manufacturing facilities. By the 1990s, the Inner Loop was underutilized, particularly along the eastern section, and considered an undesirable barrier separating the downtown from residential neighborhoods.

Initially, rather than remove the highway, the City proposed simply bringing the eastern section of the Inner Loop up to grade. This idea was endorsed by the City's Vision 2000 plan, which was adopted in 1990, but did not receive funding (Raymond & Magi, 2018). The Community Design Center of Rochester and the City held community design charrettes in 2000 and 2007 to envision a new plan for Downtown Rochester, which eventually progressed into a proposal to convert the Inner Loop into a boulevard (Raymond & Magi, 2018).

In 2012, the City received a \$17.7 million TIGER grant from the Department of Transportation to remove a portion of the freeway (US DOT, n.d.). From 2014-2017, the Inner Loop East project removed two-thirds of a mile from the eastern section of the Inner Loop and replaced it with an at-grade boulevard lined with bike lanes and trees, and surrounded by mixed-use residential communities (Figure 4); (US DOT, n.d.). A second project to continue the teardown and redesign of the northern section Inner Loop is under development (Figure 2).

Figure 2. Timeline of the Inner Loop Creation and Transformation. Dates sourced from the Community Design Center of Rochester (Raymond & Magi, 2018).

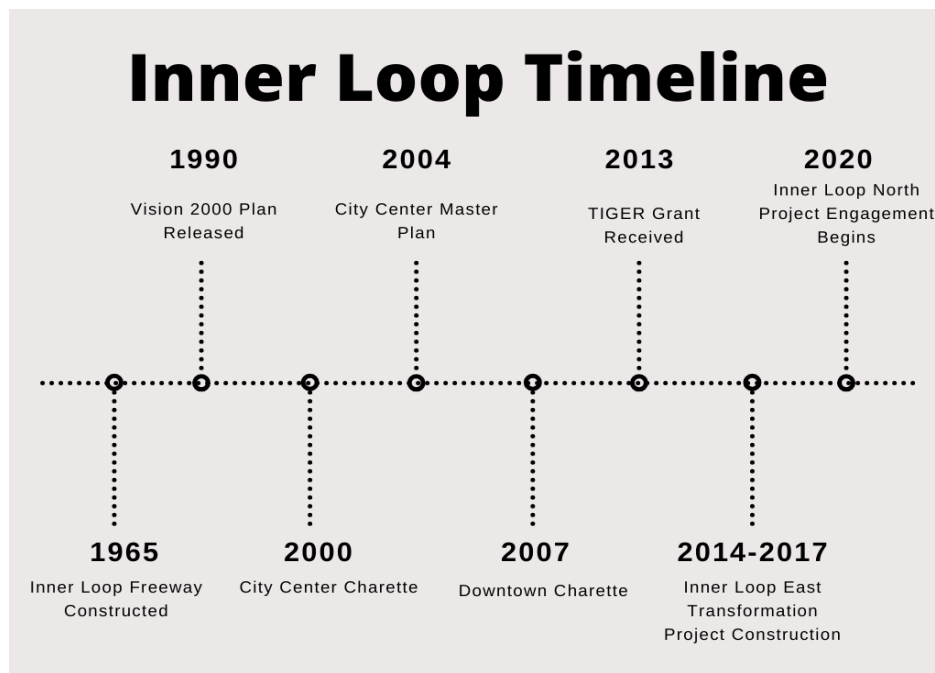


Figure 3. Map of Rochester Inner Loop East (Source: US DOT, n.d.)



Rochester is one of few cities who have completed this type of freeway-to-boulevard project in recent years. It is considered a model for other cities pursuing similar projects as federal support increases.

New funding sources for freeway removal and redesign projects include the 2021 Infrastructure Bill, the 2022 Inflation Reduction Act, and the Department of Transportation's Reconnecting Communities Program (US DOT, 2023). Because of the large scale of these projects, smaller or mid-size communities may need additional resources to successfully compete for DOT grants. The Community Connectors Program supports small and mid-sized communities seeking to repair harm from divisive infrastructure. This year the program awarded 15 mid-size communities with grants of up to \$130,000, with a goal of building capacity and co-designing reparative infrastructure projects (Smart Growth America, 2024). The EPA Office of Community Revitalization is beginning a project aimed at supporting Community Connectors grant recipients through the process of engagement, partnership-building, and community-led design.

This project is a mixed-methods case study of Rochester's freeway-to-boulevard project that aims to inform the EPA Community Office of Revitalization as they begin community engagement and design processes for similar projects in other communities.

The project addresses the following research questions:

- How did the Inner Loop East Transformation project affect quality of life (access to greenspace, mobility, neighborhood connectivity, air quality, and gentrification)?
- How did the community engagement and project design contribute to the project's outcomes?
- What lessons can be taken forward into future projects?

Literature Review

The Freeway Revolt Movement

Federal legislation like the Federal-Aid Highway Act in 1956 supported the creation of a sprawling highway network and facilitated white flight and suburbanization (Mohl, 2004). Initially planners and engineers completely controlled construction routes, and used them as a mechanism for urban renewal (Mohl, 2004; DiMento & Ellis, 2012). Neighborhoods and business districts were demolished or carved in half, and planners and engineers often targeted Black and low-income neighborhoods (Mohl, 2004; Archer, 2020). Over a million residents were directly impacted by this destruction, in addition to the indirect damage experienced by the residents who remained in neighborhoods bisected by freeways (Levine, 2023).

Opposition movements sprang up across the country in response, creating “the freeway revolt” (Mohl, 2012). Over time, through a combination of grassroots organizing and litigation, the movement won new regulation limiting the power of state highway engineers; for example, requirements in the Federal Highway Act of 1962 for state DOTs to work with local governments in developing “a cooperative, comprehensive, and continuing urban transportation planning process” and provide relocation assistance to people who were displaced (Mohl, 2004). Despite the movement’s successes, transportation planning and infrastructure has remained dominated by the freeway system, and neighborhoods split by freeways continue to suffer the consequences. Freeways continued to be built through Black and immigrant neighborhoods at a disproportionate rate despite the freeway revolt movement. People of color and people with low incomes remain more likely to live by a freeway, experiencing the harmful effects of noise and air pollution (Park & Kwan, 2020). Freeway expansion has also continued, producing urban sprawl and associated negative environmental and health impacts (Resnik, 2010);(Mohl, 2004). Planners and engineers historically argued that increasing road capacity will alleviate congestion, and used that as justification for continuing to fund freeway expansion. However, research has shown that increasing road capacity leads to induced demand and is not a viable solution for congestion (Volker et al., 2020).

The Freeway Removal Movement

The Interstate Highway System is now aging, and major investments are required for repair and reconstruction (Archer, 2020). In light of harmful impacts of the freeway system, there is a growing movement to remove freeways rather than continue to invest in them (Archer, 2020; Kraft-Klehm, 2015; Mohl, 2012). Government agencies, planners, and politicians are also becoming more interested in freeway removal or redesign projects. As the federal government takes an increased interest in funding climate mitigation and resilience, there is opportunity for investment in megaprojects such as freeway deconstruction (Napolitan & Zegras, 2008). The Inflation Reduction Act’s Neighborhood Access and Equity Grant Program solicits projects that will “reduce surface transportation-related greenhouse gas

emissions and other air pollution" in "disadvantaged or underserved communities" (Stehlin, 2023; Yarmuth, 2022).

Despite this increase in governmental interest and funding, available funding for highway removal and redesign projects remains dwarfed by the amount of funding devoted to highway maintenance and expansion (Lee, 2023). Political pressure from both the public (who generally favor highway expansion) and industry continues to incentivize expanding highway capacity (Lee, 2023). Because of this pressure, freeway redesign projects often incorporate a way to preserve the freeway in some form, either by capping, tunneling, or rerouting instead of doing a true removal project (Mohl, 2012; Stehlin, 2023).

Through case study analysis, Napolitan & Zegra (2008) developed a framework for when a freeway removal project is likely to occur. They identified the following four conditions:

1. The freeway's condition raises concerns about its integrity and safety;
2. A window of opportunity exists, some events that enables a freeway removal alternative to gain serious consideration;
3. The value of mobility is lower than other objectives such as economic development; and
4. Those in power value other benefits more than they value the benefits associated with freeway infrastructure for the alternative of freeway removal to be selected.

They found that freeway removal decisions tend to happen in a relatively ad hoc way, "based on a series of events and circumstances rather than an explicit evaluation of all the alternatives—including removal—and their impacts," and argued that an opportunity exists to develop structured evaluation systems for decision making around investments in aging infrastructure (Napolitan & Zegras, 2008).

Napolitan & Zegra's third condition, "the value of mobility is lower than other objectives such as economic development," speaks to the fact that highway removal projects in the US are far more politically palatable along underutilized stretches of freeway, where issues of congestion are not salient and significant mode shift would not be required (Napolitan & Zegras, 2008). Stehlin writes about the concept of freeway removal as a "socio-ecological fix," and argues that while freeway removal has the potential to repair social division in urban space, reduce car dependency, and foster sustainable mobility, in practice these locally-based projects often reinforce existing regional patterns of carbon-intensive mobility and land use (Stehlin, 2023). In most cases if traffic models project increased congestion due to a freeway-to-boulevard conversion, cities are pressured to re-route and maintain traffic flow rather than attempt to reduce vehicle miles traveled (Stehlin, 2023).

Potential Benefits

Some freeway removal advocates, including the Congress for New Urbanism, argue that freeway removal can create a "reduced demand" effect, an inverse of "induced demand" that suggests removing freeways will shift demand towards more environmentally friendly modes of travel like transit, walking, and biking (Mohl, 2012). Case studies of completed freeway removal projects show that the change in traffic patterns has not been disruptive, and in many cases traffic volume actually decreased (Garrick &

Billings, 2013). However, research is limited, and the concept is not reflected in traditional transportation planning metrics and models.

Removing freeways can restore the grid and free up land for other purposes, like housing, parks, business, or transit (Mohl, 2012). Depending on the context, freeway removal/re-envisioning projects could be a form of reinvestment and reparative planning in neighborhoods that were harmed by the initial construction of the freeway (Archer, 2020). Additionally, freeway removal projects have the potential to create health benefits by reducing exposure to air pollution and noise pollution, increasing access to greenspace, and improving safety and mobility for pedestrians and bikers (Brauer et al., 2008; Brugge et al., 2007; Penedo & Dahn, 2005; Stewart, 2020; Tzoulas et al., 2007; Wang & Cicchino, 2020; Zhu et al., 2002).

Patterson and Harley (2019) analyzed the air quality impact of freeway rerouting and boulevard replacement in West Oakland, and found that annual average concentrations of nitrogen oxides and black carbon decreased along the new boulevard (Mandela Parkway). Kim et. al (2018) examined health benefits of freeway capping, using the Cross-Bronx Expressway in New York City as a case study of deck parks. After modeling health benefits from increased exercise, fewer accidents, and less pollution, they concluded that the project would save money and lives (Kim et al., 2018). While this case study focused on freeway capping and the creation of deck parks, many of the same health benefits would apply to freeway-to-boulevard conversion projects.

Property Values and Gentrification

While freeway construction was used as part of the urban renewal strategy in the postwar era, now freeway deconstruction is often employed as an urban revitalization strategy (Mohl, 2012). Rather than stemming from widespread movements like the 1960s freeway revolts, freeway removal projects in the US tend to be championed by “policy entrepreneurs” and coalitions of planners, environmentalists, real estate and business leaders, and local politicians (Stehlin, 2023). Cities have used freeway removal as an avenue to create more land, increase accessibility of downtown areas, boost property values, and attract new tourism and business. These things can be beneficial, but they also create risk of gentrification and displacement.

In Seoul, Korea, the Cheong Gye Cheon elevated freeway was removed and replaced with an urban park, and property values of land parcels within 500 meters of the freeway increased as a result (Kang & Cervero, 2009). In Milwaukee, the Park East Freeway was replaced with a boulevard, restoring access to downtown and the Milwaukee Riverwalk. In the five years after the project was completed, land values surrounding the old freeway footprint increased by over 180 percent (McCormick, 2020).

Cervero et al. (2009, page 1) conducted a case study of two freeway conversion projects in San Francisco, and concluded that “freeway conversion generally gentrifies neighborhoods, although policies like affordable housing mandates can temper displacement effects.” In their research on the West

Oakland freeway rerouting and boulevard replacement project, Patterson and Harley found evidence of environmentally driven neighborhood change (Patterson & Harley, 2019). A decrease in the long-time Black population along the Mandela Parkway coincided with large increases in property values in the area, on a scale that was out of proportion with the rest of West Oakland (Patterson & Harley, 2019). Additional research on the relationship between freeway removal/conversion and gentrification is needed, particularly for projects outside of the Bay area.

Research Gap

There are few studies that conduct in-depth analysis of neighborhood change and health impacts due to freeway removal projects, and no studies investigate how community engagement processes influenced those project outcomes. The recently completed freeway-to-boulevard conversion project in Rochester provides an excellent case study for assessing health and quality of life benefits, as well as land value and gentrification in a different housing market.

Methodology

Site Selection

Rochester, New York was selected for this case study based on two primary criteria:

1. **Recent completion (within the last ten years) of a freeway-to-boulevard project.** Construction on Rochester's Inner Loop East Transformation project began in 2014 and was completed in 2017.
2. **Small to midsize city, comparable to this year's Community Connectors grant recipients.** 15 communities across the country are participating in the Community Connectors program, including two from New York (Albany, population 100,826, and Buffalo, population 276,486) (Smart Growth America, 2024). Rochester, NY has a population of around 210,000.

In addition to meeting these criteria, Rochester is unique in having one freeway removal project complete and one underway, which allowed for evaluation of changes in planning approaches and attitudes over time. Finally, myself, my client, and my academic advisors had personal and professional connections in Rochester, which helped facilitate recruitment of interviewees.

Descriptive Analysis

To spatially assess potential benefits to quality of life, I compared the years before and after the project was completed in the census tracts bordering the Inner Loop East.

Air Quality and Traffic

I used EPA's Fused Air Quality Surface Using Downscaling (FAQSD) data to assess changes in ozone and fine particulate matter (PM_{2.5}) before and after the Inner Loop East project. The FAQSD data "fuses" daily ozone (8-hr max) and fine particulate air (24-hr average) monitoring data with 12 km gridded output from the Models-3/Community Multiscale Air Quality model, providing daily predictions for US Census Tract centroid locations (based on 2010 Census Tracts) (EPA, 2023b). I also looked at asthma-driven emergency department (ED) rates, using zip-code level Statewide Planning and Research Cooperative System (SPARCS) data analyzed by Common Ground Health (Common Ground Health, 2024). Finally, to understand whether changes in air quality may be attributed to differences in pollution from traffic along the Inner Loop, I used percent change in NYSDOT Average Annual Daily Traffic and truck volumes along Union street and in the surrounding area from before 2014 and after 2017 (NYSDOT, n.d.).

Mobility and Connectivity

My assessment of mobility and connectivity was based on pedestrian and bicycle mobility information collected by Stantec (a consulting firm involved in the freeway transformation project), and interviews with local planners, advocates, and community members.

Neighborhood Characteristics

To assess neighborhood change, I used census data to compare socioeconomic, demographic, and housing characteristics before and after the project, in Rochester and the census block groups bordering the Inner Loop East. This included census data on race, income, education, percent renters vs. homeowners, median gross rent, and median home values. I also interviewed planners, community advocates, local business owners, and residents about perceptions of neighborhood change.

Qualitative Analysis

Interviews

Hinge Neighbors³, a small nonprofit focused on engaging neighborhoods in Rochester on planning issues through community events, provided valuable context for the project and the community when I was first starting the project and connected me to many of the interviewees. I interviewed fourteen people over the course of twelve interviews. Interviewees included city planners, advocates, business owners, developers, and residents. Some interviewees fit multiple categories (Table 1).

Table 1. Interviewees by Category.

City planners	4
Community advocates	4
Local business owners	2
Developers	1
Local residents	5

Documents

I reviewed a set of city planning documents, documents from engagement efforts, news articles, and social media posts to provide context for the project and interview data.

Planning Documents: I reviewed the following set of city planning documents.

³ See the Hinge Neighbors’ website for more information: <https://hingeneighbors.com/>.

1. [Inner Loop East Scoping Study](#)
2. [Inner Loop East Draft Design Report](#)
3. Inner Loop East [Final Design Report](#)
4. Inner Loop East 2016 Design and Land Use RFPs (S. Dubnik, personal communication, March 2024)
5. [Inner Loop North Transformation Planning Study](#)

Community Engagement Documents:

1. [2001 Public Workshop Document](#)
2. Inner Loop East Design Charrette Materials (S. Dubnik, personal communication, March 2024)
3. Rochester Community Design Center Presentation at CNU (Raymond & Magi, 2018)
4. Hinge Neighbors Community Engagement Materials & Presentations (Lewis Street Community Committee, 2021; S. Mayer & S. Dunwoody, personal communication, November 8, 2023)
5. [Inner Loop North Public Meeting Summaries](#)

Facebook Posts: I identified relevant Facebook posts by searching the terms “Inner Loop” in the Rochester Urbanists group, resulting in 11 relevant posts and hundreds of comments. The Rochester Urbanists are an open group, and the people posting there tend to be highly engaged community members with a strong interest in local issues and urbanization.

News Articles: I analyzed the following news articles related to the project:

- [What happened when Rochester tore out an urban highway?](#) (Fast Company Magazine): provides an overview of the project and some analysis of the results, including quotes from Hinge neighbors, planners, and experts in freeway removal.
- [Burying a 1950s Planning Disaster:](#) (Bloomberg): offers an analysis of how Rochester's project came to be within the historical context of urban renewal and freeway construction.
- [Inner Loop East: We asked for your thoughts on the highway's removal. Here's what we got](#) (Rochester Democrat and Chronicle): Provides responses from a local survey of residents about their thoughts and questions about the Inner Loop East project.

I used ATLAS.ti as a tool to organize and code interview transcripts and documents. I used implicit tagging of phrases or paragraphs with categories in the style of Weiss (Weiss, 1994), as opposed to doing a formal frequency or co-occurrence analysis. I coded the data along the following categories:

- Mobility: Bikes, Pedestrians, Connectivity, Congestion
- Economy: Development, Commercial, Business
- Land Use: Greenspace, Housing, Public Space, Retail
- Equity: Gentrification, Reparations, Displacement
- Sentiment: Positive, Negative
- Engagement: Public, Stakeholder, Community

Case Study of Rochester Inner East Loop Transformation Project

Project Decision and Public Sentiment

Rochester's Inner Loop Transformation project came to fruition through a combination of local political support and strong advocates, cost-effectiveness and economic benefits, and project feasibility. Because the Inner Loop was a sunken highway, it simply had to be filled in rather than torn down and trucked away, and because the Inner Loop was underutilized, it did not require rerouting of huge numbers of vehicles. The City's stated goals for the project were to increase traffic safety, support healthy lifestyles and improve livability, reconnect neighborhoods with downtown, promote development, and save money (City of Rochester, n.d.)

In my interviews with former city planners and local advocates, the decision to remove the eastern portion of the loop was consistently referred to as a "no-brainer." The overbuilt highway infrastructure created a barrier between neighborhoods, and the highway's aging infrastructure, including bridges and retaining walls, were prohibitively expensive to repair and maintain. Importantly, the land that was opened up by filling in the highway could be returned to the city as taxable parcels to a City in need of revenue (J. Haremza & B. Ryan, personal communication, March 5, 2024).

The entire Inner Loop was underutilized, but particularly the eastern portion of the 12-lane highway which carried only around 6,000 cars a day (for reference, a two-lane street can often carry closer to 15,000 cars a day) (J. Haremza & B. Ryan, personal communication, March 5, 2024). The City began with filling in only the Eastern portion of the Inner Loop because they did not believe they could get funding for the entire project. Filling in the eastern section was fairly straightforward compared to the northern section; it was a smaller project and had fewer engineering challenges, such as no railroads to work around (B. Garwood, personal communication, February 23, 2024).

While there was initially some skepticism around removing the highway, the public sentiment reflected in the media around the completed removal project was largely positive. In a survey conducted by the Rochester Democrat and Chronicle, supporters cited walkability, pedestrian access to nightlife and workplaces, new bike paths, improvement in traffic, and additional housing as key benefits.

In an interview with Steve Dubnik from the Strong Museum of Play, he spoke about how successful the project had been in its goal of reconnecting neighborhoods, saying that *"you see people walking over from Alexander...across to the Midtown area...and that was just physically impossible in the past."*

A few people commented that they preferred the highway to the new boulevard. For those people, the primary concern was connectivity (via automobile). For example, a Rochester Democrat and Chronicle survey respondent stated *"I preferred having the inner loop. It was a useful connection to get around the*

city. I think these projects were a bad idea. A big waste of money eliminating something useful” (Lahman, 2023).

There remain concerns among some residents and housing advocates around the City’s priorities for the project. Several longtime Rochester residents expressed concerns about the potential for displacement, and linked the project to instances where existing apartments and homes in the surrounding area were torn down in favor of new development. One resident, Miss Moralis, spoke about the Inner Loop East Transformation Project as one more instance of the City tearing things down and rebuilding instead of investing in what (and who) is there already (M. Moralis, personal communication, April 25, 2024).

While the actual removal of the Inner Loop highway section was received well overall, the land use and development of newly freed up parcels was more controversial. Another Democrat and Chronicle survey respondent wrote, *“When I heard that the inner loop was going to be turned into a green space with easy-to-navigate and safe bike paths I was so excited. My excitement turned to frustration, and I saw more unaffordable apartments go in instead. Where is the space for community?”* (Lahman, 2023).

Land Use and Development

In 2013, before construction began on the Inner Loop East Transformation project, much of the land alongside the eastern section of the freeway was used for parking lots or warehouses. By the time construction was completed in 2017, the project had restored parts of the street grid along Union Street, creating an at-grade “complete street” with protected bike lanes and walking paths and opening up 5.7 acres of land for mixed-use development directly along the boulevard (and around 3 additional acres in the surrounding area) (B. Garwood, personal communication, February 23, 2024; US DOT, n.d.).

Figure 4. Bike Path along Union Street (Photo by Arian Horbovetz)¹

New street trees and plantings were added along both sides of the street, and colorful bike racks and benches were installed throughout the area (Figure 4; Figure 5). The remaining land parcels were used for new housing developments as well as an expansion of the Strong Museum of Play.



Figure 5. Site change from 2013-2024 (Source: Google Earth)



Figure 6. Parcels created as part of the Inner Loop East Project.⁴



The City released a Request for Proposals for the development of the 5 sites directly along Union Street in 2016 (Figure 6). It laid out the following overarching criteria for selection:

- Present the highest and best use for the location in general, and the Sites specifically;
- Return the sites to the tax roll and increase the City's tax base;
- Present high quality design and visually enhance the streetscape;
- Integrate the neighborhoods formerly divided by the Inner Loop.

It also set design guidelines (see Appendix A), which included things like inclusion of “publicly accessible open/green space”, use of high quality building materials, active first floor spaces and buildings that are

⁴ Image from Home Leasing presentation courtesy of Bret Garwood. Includes the parcel along Charlotte Street, which was in part newly available because of a brownfield cleanup the City conducted as a part of the Inner Loop East project (B. Garwood, personal communication, February 23, 2024).

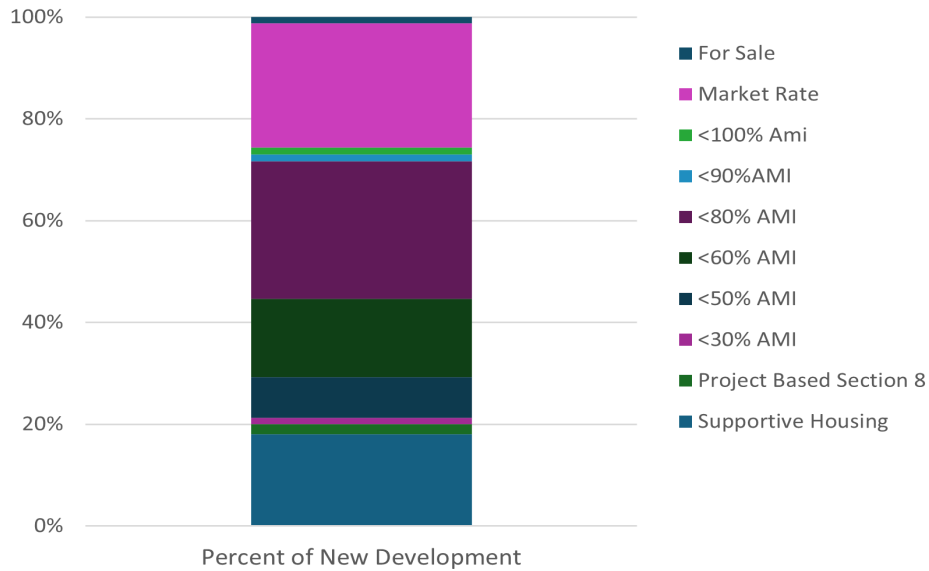
“truly urban” in terms of scale, and “variety in building massing and facades; the goal is to prevent monolithic structures.” Despite being included in the RFP, the final developments were criticized for lacking many of these qualities.

Affordable Housing

Ultimately, the sites were developed into large affordable housing apartment complexes as well as some townhomes. In total, including the new developments along Charlotte Street, 10 new multifamily projects were developed with a total of nearly 700 units. According to data collected by Home Leasing affordable housing developer Bret Garwood, rents across the projects range from \$450 to over \$3,000, and 75% of units are considered affordable housing, with the following approximate breakdown:

- 25% market rate
- 30% moderate income (60-100% AMI)
- 45% low-income (<60% AMI)
- 30% very low-income (<50% AMI)
- 20% extremely low-income (<30% AMI) with rental subsidy, including 125+ supportive housing units.

Figure 7. Inner Loop East Development Affordable Housing Percentages (Source: Garwood, 2024).



The new apartments were met with mixed opinions. Across interviews, social media, and news articles, people expressed a desire for more open space/greenspace, more varied building types, and higher-quality construction.

Many people were frustrated with the block-long, contemporary apartment buildings built along Union Street. A saying repeated across multiple interviews, including my interview with Hinge Neighbors, was *"They took down the moat and put up a wall"* (Figure 8).

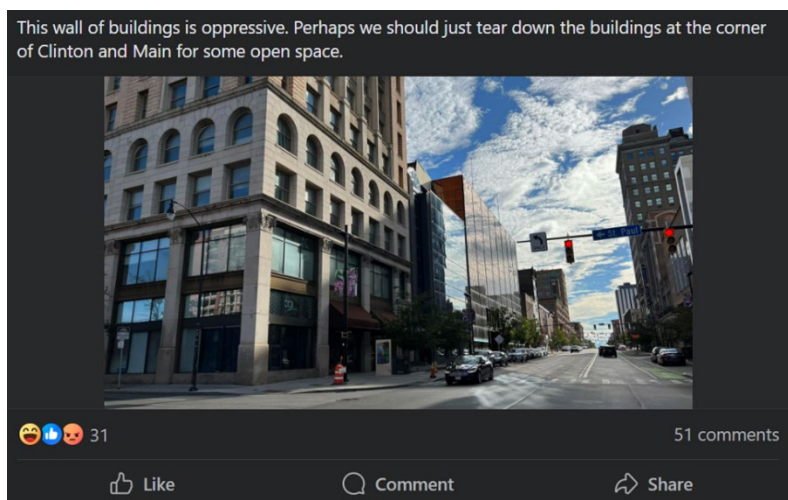
Figure 8. New Development on Union Street (the "wall"); Image from Google Earth.



Developers, planners, and urbanists tended to be frustrated with that perspective, viewing dense apartment buildings as appropriate for the location. For example, in the image below posted by a member of the Rochester Urbanists counters the idea that large buildings create an undesirable wall (Figure 9).

Figure 9. Image from Rochester Urbanists Facebook Group.

The desired mix of affordable housing was also a highly prioritized and contentious topic. For example, some members of the online Rochester Urbanists group viewed the new development as being luxury apartments that are unaffordable to average residents. Other members believed that more market rate housing should be encouraged, in order to entice additional and higher-quality development. There was also disagreement among members of the Rochester Urbanists group as to whether cookie-cutter high-rise apartments should be discouraged in favor of more unique "high-quality" designs, or if they were a reasonable trade-off for the benefits of increased density and affordability.



While people had different opinions about how to achieve it, there was a general consensus that the design and materials used for construction could be improved. Rory Van Grol, owner of the local coffee shop Ugly Duck Coffee, shared, *"I think just different levels would help but also colors and aesthetic would also be nice... there's a little neighborhood called the Neighborhood of Play further up the Inner Loop...and that looks to me like more of a natural neighborhood than like just like a bunch of buildings just dropped in a certain space. They're all very blocky."* Long-term Rochester resident Casandra Christine spoke about the lower quality of new homes being built in different areas of the city, noting that the structure, foundations, and materials are not what they used to be (C. Christine, personal communication, April 22, 2024).

Bret Garwood believes building more market rate housing would benefit the economy but says it is extremely difficult to build in Rochester's current housing market without federal funding support from large-scale affordable housing programs like LIHTC, citing high construction costs and interest rates (B. Garwood, personal communication, February 23, 2024). He also argued that using brick and other expensive materials is not feasible in Rochester's current housing market, *"The reason that all new buildings look alike, largely from a massing point of view, is because code makes them, right? Building Code makes them. You know, I like contemporary looks. I like contemporary design. Lots of people just don't. But also lots of people wish that we could use materials that are more expensive than our market can support."*

Part of what this conflict ultimately comes down to is people's different understandings of what is "affordable," and what the goal should be in terms of a mix of affordability, density, and quality. Developers and planners often use federal standards such as AMI (Area Median Income) to define housing affordability, but those definitions don't always align with people's lived experience and what is locally considered to be affordable. There are also varying ideas about how much market rate housing should be used to try to subsidize affordable housing and attract high-earners to the area, and whether that will end up raising rents and pushing out existing low-income residents.

Home-ownership

One priority that came out of Hinge Neighbor's community engagement, as well as several of my interviews, is the desire for home ownership as a way to uplift and stabilize the community. For many, this would look like building more affordable, single family homes. This aligns with community feedback in the Syracuse Community Vision Grid 2024, where affordable home-ownership and affordable housing were also common goals (Dover, Kohl, & Partners, 2024).

Rory Van Grol suggested the use of co-ops to increase building equity and ultimately create a safer, more cohesive downtown. He commented, *"I would like to see more people have ownership of that downtown. Other than the developers, you know, I would love to see more folks having homeownership and for coops or things of that nature; to be able to claim it rather than rent and then leave. Because I think that's a lot of things that people do."*

Rory and others had a sense that the City did not ask much of the developers because they were so afraid that the developer's might walk away from the project. He noted:

I feel that the city has a mindset where if they don't appease them [the developers], then they're gonna go away. And I just don't believe that. I don't believe that. We're not asking enough of them. We're just accepting what is so I just don't believe that that in the long term, makes it equitable for our city. If we want to have something built with a strong base, we have to give people a reason to stay.

Greenspace

Regardless of their views on the new apartment complexes and appropriate housing density for the area, many people wished that some of the land had been set aside for a new park or intentional greenspace of some kind, that could serve as a public gathering place for the community.

Rory Van Grol spoke about the creation of a temporary greenspace across from Ugly Duck Coffee that resulted from local advocacy after a lot was abandoned by developers (Figure 10):

We convinced them to just put down seed and dirt, you know, leave it open and plant grass and they've done that and they've added some benches, which is better than nothing. And it instantly makes it more inviting. We've already seen families, kids, people activate that space with dogs playing frisbee playing football, you know, like playing catch with each other. Just actually using the space in such a short amount of time.

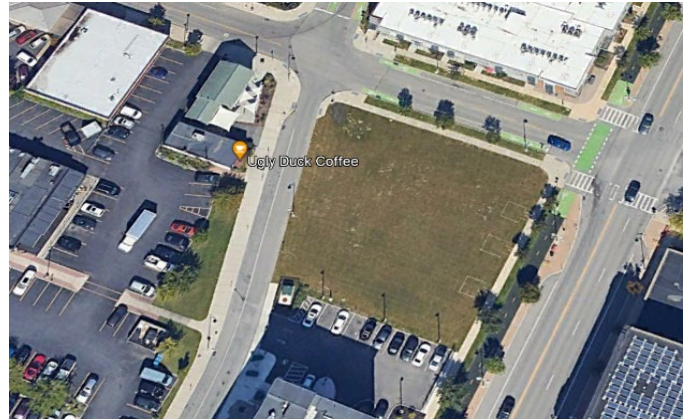


Figure 10. Vacant lot across from Ugly Duck Coffee (Image from Google Earth, taken August 2023)

He noted that the city maintained it as temporary, rather than designating it as a formal park, which would require insurance and regular upkeep and would prevent resale to a future developer (R. Van Grol, personal communication, February 15, 2024).

The preferred design concept for Inner Loop North incorporates community feedback around greenspace. If implemented, it would create eight new acres of greenspace by restoring Franklin Square Park and Anderson Park and creating a new community greenspace north of the World of Inquiry school (City of Rochester & Bergmann, 2022).

Parcel Size

The size of land parcels created for development was also a point of contention, and both Hinge Neighbors and members of the Rochester Urbanists group supported smaller parcels for the Inner Loop North project. Hinge Neighbors presented smaller parcels as a potential equity measure, to allow a more diverse set of smaller developers the opportunity to build, and to allow for more mixed-use development including single family homes (S. Mayer & S. Dunwoody, personal communication, November 8, 2023).

Erik Frisch, Deputy Commissioner of Neighborhood Business Development, and David Riley, Principal Transportation Specialist in the City's Department of Environmental Services, recognized the desire for

smaller scale and a focus on affordable homeownership opportunities, particularly near the Marketview Heights Neighborhood, and said that the City is committed to working to advancing affordable homeownership in that area. They also noted that other areas will be more mixed use and higher density, particularly west of the river and closer to downtown (E. Frisch & D. Riley, personal communication, February 29, 2024).

Several city planning professionals, as well as Home Leasing developer Bret Garwood, believe that smaller lots are infeasible and may lead to lots sitting empty. Jason Haremza, former planner with the City of Rochester and Reconnect Rochester Advisory Board Member⁵, spoke about the connection between the desire for smaller lots and the desire for single family homes (J. Haremza & B. Ryan, personal communication, March 5, 2024). He argued that because the housing market in Rochester is weak it requires the use of large parcels and federally subsidized multifamily housing developments, and pointed out the additional cost of getting smaller parcels shovel-ready. Jason stated:

Somebody's got to pay a surveyor to do the planning and do the subdivision. The funding for the road project never includes that kind of funding. Who's paying for...25 water and sewer connections instead of one water and sewer connection for a block size multifamily development like these...these are the costs that are not really considered by the advocates of smaller planning and individual lots.

Erik Frisch attributed the large parcel sizes of the Inner Loop East project to two things; one, the layout of the street and the linear, long blocks that were opened for development, and two, the financial feasibility of large affordable housing projects. He noted that the City issued a single open-ended RFP for the seven sites that were created, and left it up to the developers to propose the design (E. Frisch & D. Riley, personal communication, February 29, 2024).

Strong Museum of Play

In addition to directly opening up new land parcels for development, the Inner Loop East Transformation Project also influenced the land use and development of surrounding parcels, with perhaps the most dramatic example being the expansion of the Strong Museum of Play. The museum expanded by 90,000 square feet, in part by expanding into the museum's large parking lot (the museum built a new 5-story parking garage as a substitute), and in part by purchasing adjacent land parcels from the City (Figure 11);(S. Dubnik, personal communication, March 4, 2024; Strong Museum of Play, 2024).

⁵All commentary is his own, as a private citizen.

Figure 11. Strong Museum of Play Post-Expansion. (Source: Strong Museum of Play, 2024)



The museum is a focal point of Rochester's Neighborhood of Play, "a new, vibrant, walkable neighborhood, revitalizing the downtown area that surrounds The Strong" (Strong Museum of Play, 2024). The neighborhood, which also includes a new hotel, market rate housing, and retail businesses, is expected to generate \$130 million in annual tourism revenue (Strong Museum of Play, 2024).

Street Design & Connectivity

Mobility and Connectivity

Between 2014 and 2019, there was a 67 percent increase in cyclists and a 49 percent increase in pedestrians, according to counts taken by Stantec along the Inner Loop East (Figure 12, Figure 13, Table 2);(Stantec et al., 2022). The increase in walking and biking can be partially attributed to the conversion to an at-grade boulevard with more places to cross, as well as the creation of protected bike lanes. Pedestrian counts sharply declined in 2020, likely due to the pandemic. The count has since begun to rebound, as indicated in Table 2.

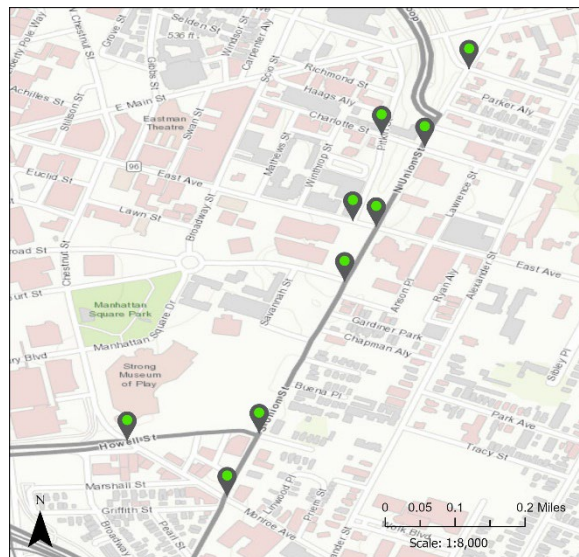


Figure 12. Bike-Ped Count Locations.

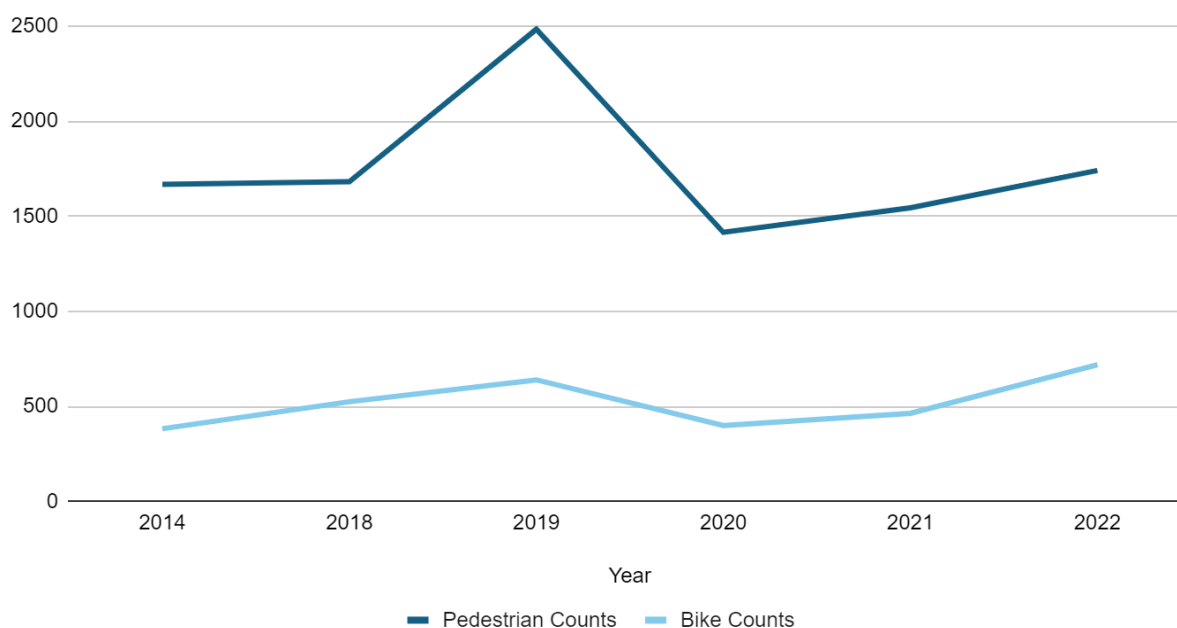
Table 2. Changes in Bike Ped Summary, 2014-2022 (Data source: Stantec et al., 2022).

	2014	2018	2019	2020*	2021*	2022*	Percent Change 2014-2019	Percent Change 2014-2022
Pedestrian Totals	1667	1681	2482	1415	1544	1740	49%	4%
Bike Totals	383	525	640	400	464	719	67%	88%

*Totals affected by the COVID-19 pandemic.

Figure 12.

Figure 13. Total Pedestrian and Bike Counts (Data source: Stantec et al., 2022)



Street Design

One of the primary goals of the Inner Loop East Transformation project was to reconnect neighborhoods divided by the highway. While the project was a major step forward in that regard, as shown by the increases in biking and walking, it still fell short of the low-speed, walkable street design for which many had hoped. Suzanne Mayer of Hinge Neighbors put it simply; *“It’s just too wide.”* There was agreement among the planners and advocates I spoke to that the road had been over-engineered to accommodate a level of traffic that assumed the road needed to be able to carry the same number of vehicles, when in reality the traffic would disperse and be closer to that of any other city street. The initial boulevard design that came out of the 2007 Downtown Charette was for a two-lane street (Raymond & Magi,

2018), but the State Department of Transportation engineers required additional lanes, fearing that a two-lane street would lead to a D, E, or F level of service (Figure 14). Jason Haremza, who formerly worked for the City of Rochester and was a member of the inter-department/inter-agency team that facilitated the Inner Loop East project, said the City had to compromise on some car-centric design choices like wider lanes and a center turning lane throughout the corridor, saying, *"We, the City, would have preferred a much more urban scale street...there's really no reason for it to be any more than a single lane in each direction."*

Figure 14. Turning Lane at Union Street and East Avenue (Google Earth, 8/2023).



Bret Garwood, developer with Home Leasing, talked about how the extra width impacted development possibilities, saying:

They did the two lanes and a turning lane; they didn't need a turning lane. Everyone knew they didn't need a turning lane. The traffic proves that you don't need a turning lane. But you know the transportation people at the State care about cars as opposed to reality. And so what the problem was...is it made the development parcels not deep enough, right? We often had only 70 or 80 feet of depth to develop. And that actually was a real problematic constraint in our projects in design.

Brendan Ryan and Jason Haremza, board members of Reconnect Rochester⁶, said they had been advocating for things to turn out differently on the design of the Inner Loop North project, and that they felt the State DOT was taking a more hands-off approach this time around. One thing they wished had turned out differently was the inclusion of an additional highway off-ramp to handle overflow traffic anticipated by their traffic model, in order to avoid a low level of service grade at the intersection of Main Street and Broad Street. Now, very few people use it, and it was a major expense that could have been avoided. Jason Haremza noted that overbuilding based on maintaining vehicle capacity and level of service grades is a common issue when funding comes through the State, and he wants *“to push back on the whole notion of that being the only metric by which we measure intersections and if a vehicle cannot get through within one change of a light that then that means it's failing.”*

Importantly, Brendan notes, *“It was definitely a lesson learned for other projects.... don't over design your street to expect that you're going to be carrying as many cars because a lot of those cars are just going to disperse.”*

When it comes to the Inner Loop North Project, the Lewis Street Community Committee, a community group representing the area of Scio Street just north of the Inner Loop, are advocating for speed calming traffic control measures, such as speed bumps and installing four-way stop signs at Scio and North (Chestnut) Street (Lewis Street Community Committee, 2021). The group also advocated for one-way, tree lined streets wherever possible.

Air Quality and Traffic

Expected Impacts

The air quality impacts of the Inner Loop Transformation Project were estimated several times throughout the project. Some studies predicted emission decreases. For instance, the 2011 Inner Loop Scoping Study used the SYNCHRO traffic simulation model to evaluate evening peak hour traffic along the new boulevard, Union Street, and estimated the following vehicle emission reductions for 2035 in the Inner Loop Area (Table 3; City of Rochester, 2011).

Table 3. 2011 Scoping Study Projected Change in Emissions.

Pollutant	Modeled Emissions (2008)	Modeled Emissions (2035)	Percent Change
HC	2,151 grams	1,994 grams	8% decrease
CO	77,428 grams	71,169 grams	8% decrease
NOx	7,405 grams	6,915 grams	6.5% decrease

⁶ Speaking as private citizens, their opinions are their own.

The projected reduction in air pollution emissions (Table 3) were attributed to the following factors:

The replacement of the Inner Loop with a community-scaled urban boulevard will encourage and enable alternative transportation modes such as pedestrian, bicycle and transit service. Connectivity from the adjacent residential communities to the commercial and business districts will be more inviting. Adjacent community cultural destinations, restaurants and many other establishments will be more readily accessible from the residential neighborhoods by foot or bicycle. These every day trips are currently achieved via circuitous routes and one-way streets around the grade separated Inner Loop expressway; hence overall traffic may see a redistribution and reduction (City of Rochester, 2011).

The June 2013 Draft Design Report was consistent with this analysis, noting that some portions of existing roadway were expected to have slightly increased traffic volumes, but that overall the project would likely reduce vehicle emissions by 6-8% based on projected traffic volumes (Stantec, 2013).

In contrast, the March 2014 Final Design Report found that air quality might worsen in the wake of the project due to increased emissions from braking, although it would still be within attainment of federal air quality standards (Stantec, 2014). The report cited a mesoscale analysis conducted for five indicator pollutants based on MOVES (Motor Vehicle Emission Simulator) emissions factors. The analysis predicted between 4-27% increases of the pollutants in the immediate area of the project corridor for all years analyzed (2015, 2025, and 2035). The expected increase was attributed to “the conversion of a limited access roadway with consistent free-flow speeds averaging 50 mph to a full access roadway with 30 mph signal controlled stop-and-go traffic” (Stantec, 2014).

Energy and greenhouse gas analyses were not required by NYSDOT for this project, as the threshold for that requirement was a new alignment of 1 mile or longer (the new alignment length for the Inner Loop East project was closer to 0.8 miles) (Stantec, 2014).

PM2.5 and Ozone

To understand the impact of the Inner Loop Transformation Project on local air quality, I assessed changes in PM2.5 and ozone concentrations. As shown in Figure 15, PM2.5 concentrations decreased between 2013 and 2018. Annual average PM2.5 concentrations decreased by approximately 21% in the census tracts surrounding the Inner Loop between 2013 and 2018, or around 4 percent per year on average (Figure 16). This result aligns with regional trends, which show an average decrease of 2.9 percent per year from 2001-2015 (Emami et al., 2018). The decrease in PM2.5 along the Inner Loop is likely attributable to more stringent vehicle emissions standards and engine controls nationwide, as the air quality model is likely not sensitive to local changes in traffic distributions from the project (discussed below).

Figure 15. Estimated Monthly Average PM2.5, Census Tract 36055009302 (Study Area 2).⁷

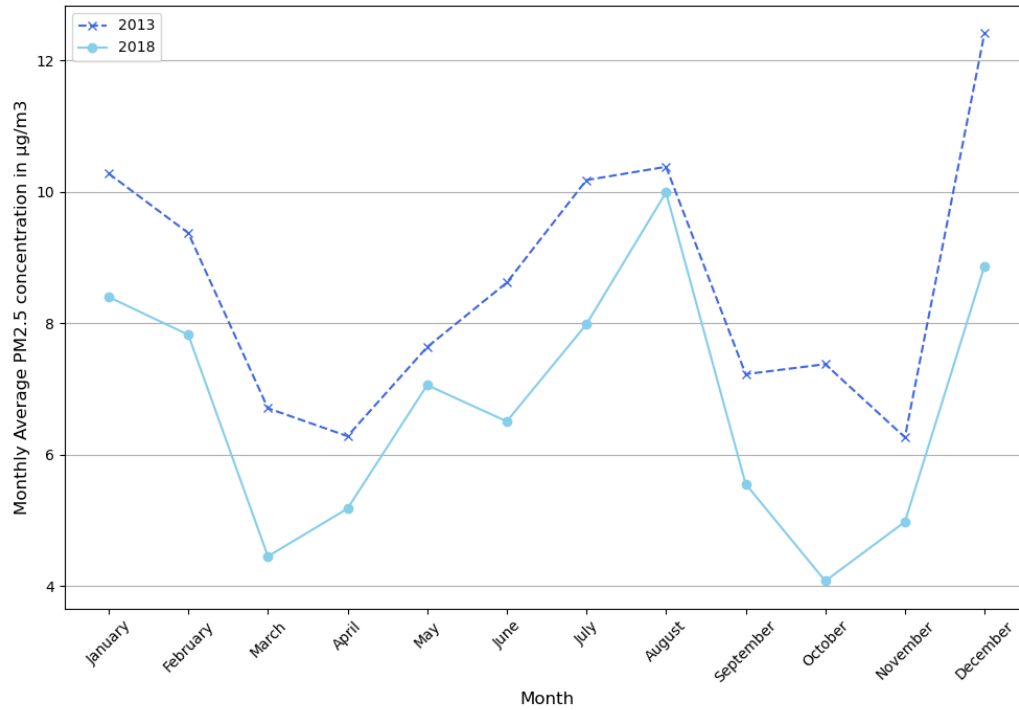
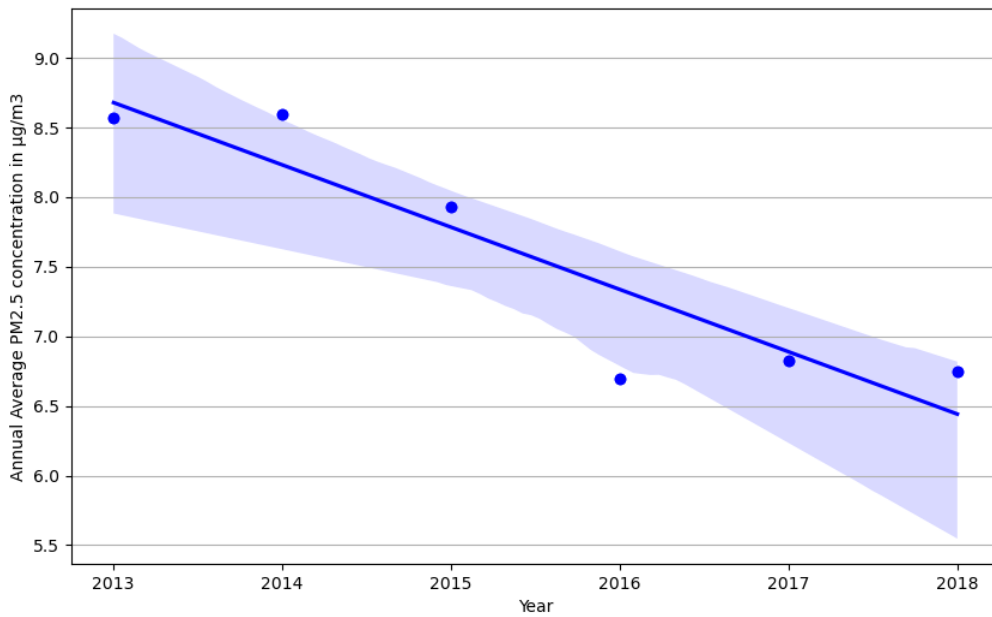


Figure 16. Estimated Average Annual PM2.5, Census Tract 36055009302 (Study Area 2).

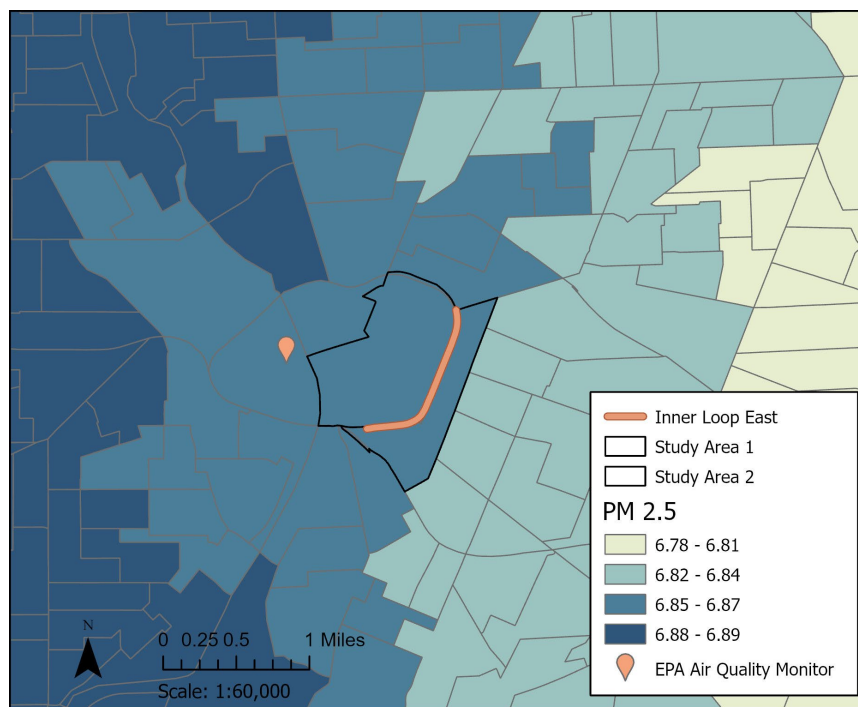


In order to associate changes in PM2.5 concentrations with the freeway removal project, hyperlocal air quality measurements are necessary. Particulate matter concentrations from traffic are generally higher

⁷ Data accessed via API. Source: Centers for Disease Control and Prevention. National Environmental Public Health Tracking Network. Web. Accessed: May 2024. www.cdc.gov/ephtacking.

within 500-600 feet from the roadway (EPA, 2014). The nearest EPA monitor taking actual PM_{2.5} measurements, which were used in the air quality model, is around 0.75 miles, or approximately 4000 ft, from the Inner Loop East/Union Street (Figure 17); (EPA, 2023a, 2023b; US EPA, 2016). Therefore, the modeled census tract-level data may not reflect changes from vehicle traffic in the Study Area.

Figure 17. PM_{2.5} by Block Group (Data Source: EJScreen, 2023) and Location of EPA Air Quality Monitor in Rochester, NY (Air Monitor Location Data Source: EPA, 2023).

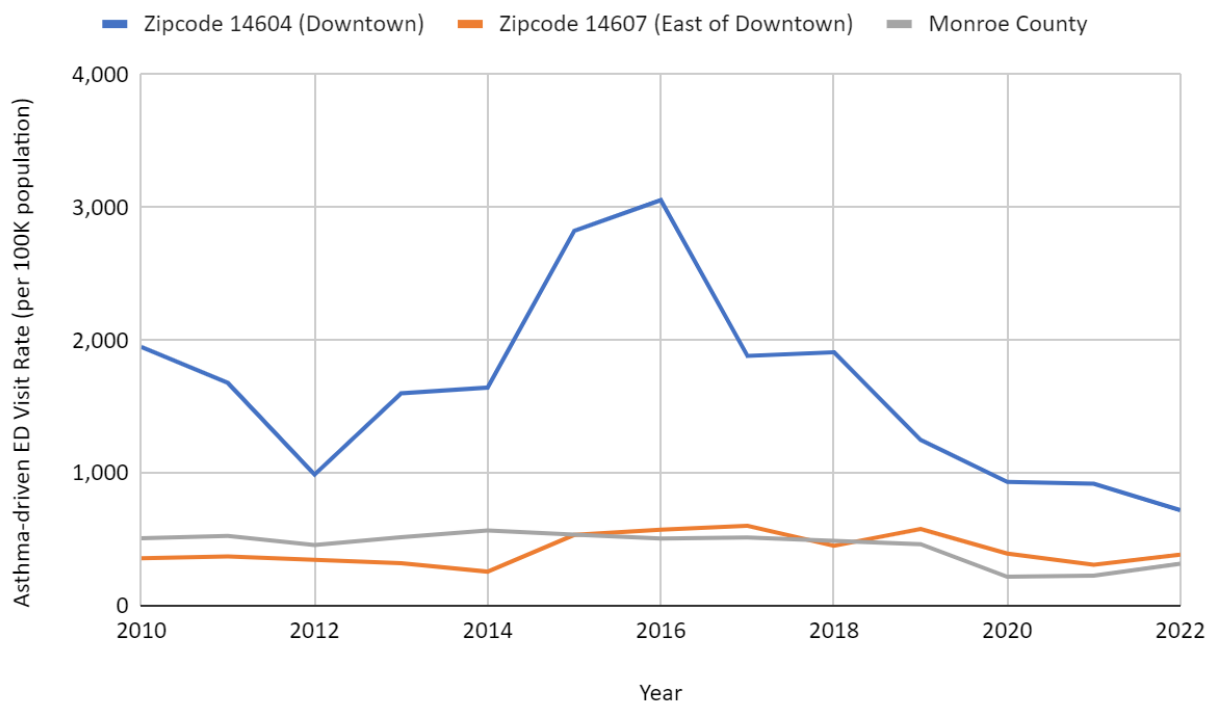


Ozone did not significantly change between 2013 and 2022. Because ozone levels are highly influenced by regional transport, it was unlikely that a local project such as the Inner Loop East project would have had a noticeable effect.

Asthma ED Visit Rates

Asthma-related emergency department (ED) visits are exacerbated by poor air quality, and studies have shown positive associations between short-term air pollution exposure and increased rates of asthma ED visits (Bi et al., 2023). Figure 18 shows asthma-related ED visits for the zip codes covering downtown Rochester (west of Union Street) and east of Union Street, in comparison with the County.

Figure 18. Asthma-related Emergency Department Visit Rate per 100,000 people (Common Ground Health, 2024)



While emergency department visits for asthma remained fairly constant in the County overall and in zip code 14607, which comprises areas east of the Inner Loop, they substantially increased in the downtown area from 2014-2018. This aligns with the primary years of construction of the Inner Loop East and associated new development. In an interview with a Rochester community member, they recalled having to avoid the Inner Loop East area during construction years for health reasons. Although standard dust control measures may have been in place, as noted below, they were not sufficient to eliminate associated health impacts.

“Although air quality within the project corridor and the immediate vicinity will experience impacts during the construction period, the use of abatement measures for dust control and proper vehicle maintenance should lessen the severity of these impacts” (Stantec, 2014).

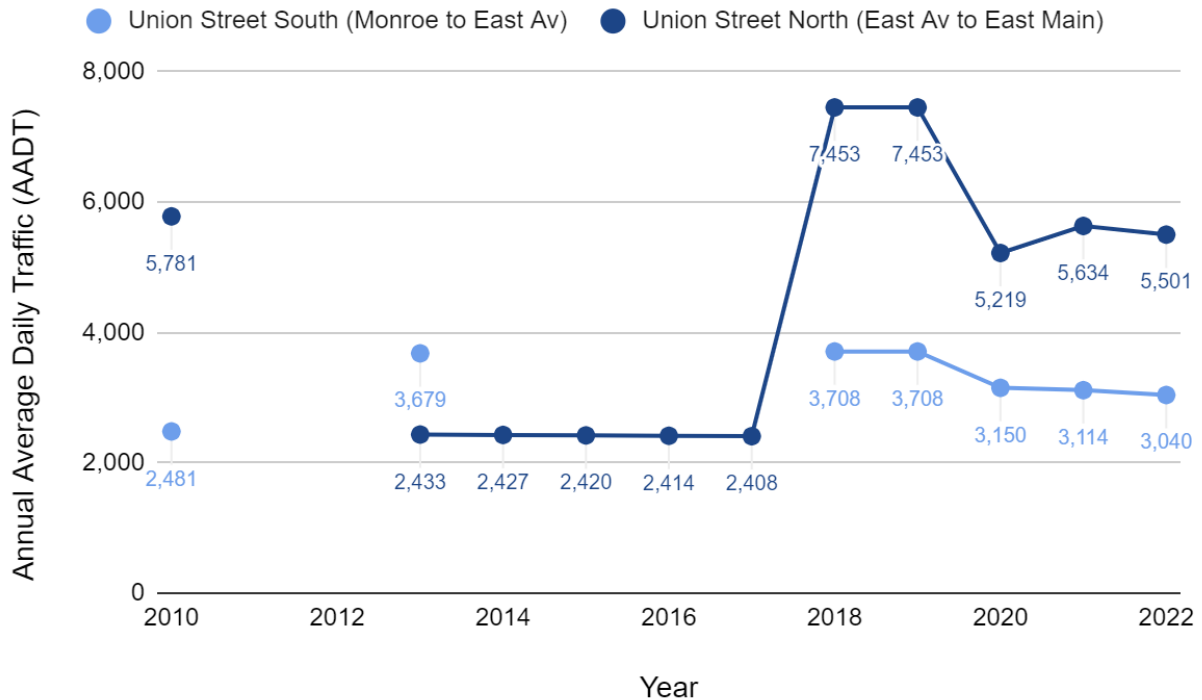
The above findings reinforce the importance of strict pollution mitigation measures during demolition and construction phases of future freeway removal projects.

Traffic

Daily vehicle traffic along Union Street from East Avenue to East Main increased in the wake of the project, up from around 2,500 vehicles per day in 2013-2017 to roughly 7,500 in 2018-2019, before decreasing again (potentially related to the COVID-19 pandemic) (Figure 19). This suggests that this segment of Union Street absorbed some of the traffic that previously used the Inner Loop. Vehicle traffic

along the segment of Union Street from Monroe to East Ave remained similar before and after the project.

Figure 19. AADT along Union Street, 2010-2022.



Overall, based on street segments that had AADT counts available before the project (2009-2013) and after (2018-2019) within one mile of Inner Loop East, AADT increased between 10 and 20 percent on average (Figure 20). These traffic counts may have been elevated by continued construction and development in the area during 2018 and 2019. The average AADT for street segments within one mile of the Inner Loop East decreased in 2021 to 11,480, a 6 percent reduction from the average of 12,236 for the 2018/2019 counts (Figure 21);(NYSDOT, n.d.). This decrease was also likely in part due to the COVID-19 pandemic.

Figure 20. Percent Change in AADT Before and After the Removal of Inner Loop East by Street Segment (Source: NYSDOT, n.d.).

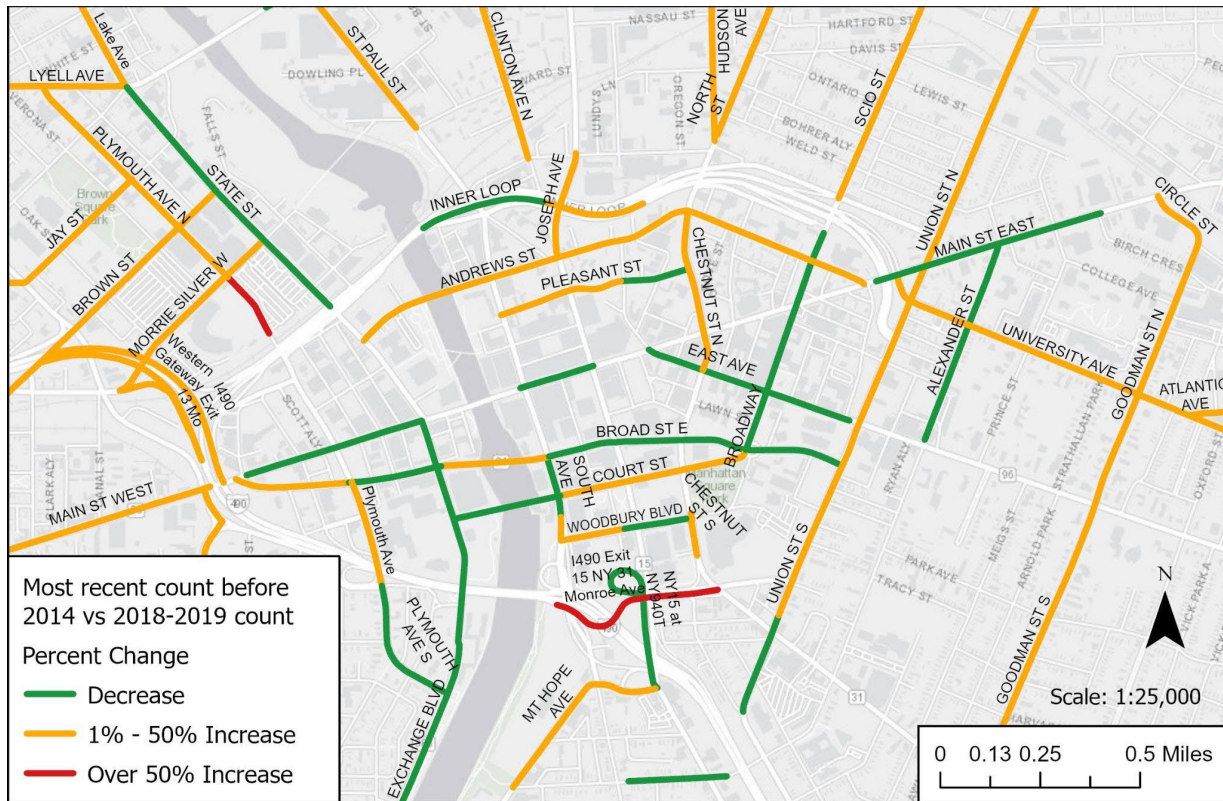
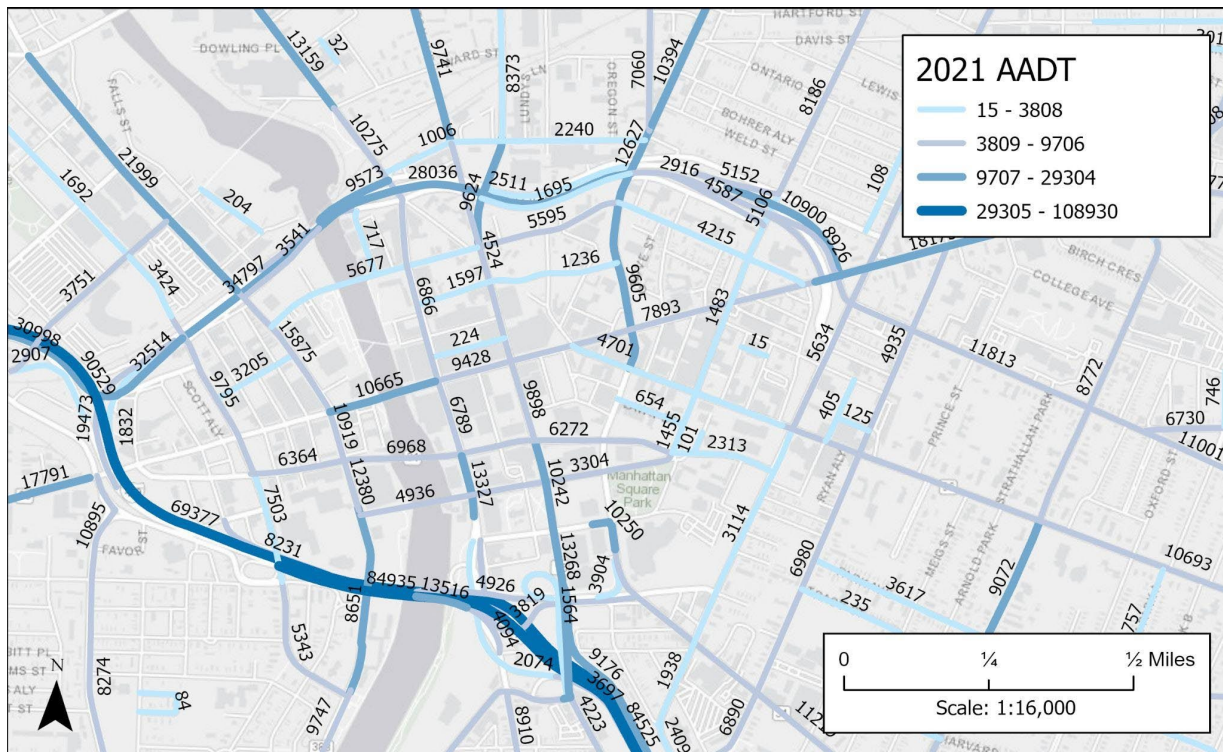


Figure 21. 2021 AADT for Street Segments within One Mile of Inner Loop East (Source: NYSDOT, n.d.).



Because the freeway was already underutilized, the boulevard and surrounding street network were able to absorb the vehicle traffic without major congestion issues. Brendan Ryan from Reconnect Rochester⁸ emphasized this point, noting that:

The reason why the state was so adamant about, you know, keeping the high level design for this street was because they're basically saying...this street is going to carry all of the traffic that the highway carried, and so [the] street needs to be able to carry all the traffic that [the highway] would carry. Not all true. I think in the final analysis, almost 70% of those cars went elsewhere. The total throughput of that corridor was, I think approaching 9000 cars a day when you included all the highway lanes, frontage roads and the actual existing Union Street...now I believe it's just under just maybe just over 3000. So most of that traffic just dispersed in the city grid.

Due to continued auto-centric planning and the goal of maintaining the same vehicle capacity, there was little coordinated planning to encourage mode shift. Roger Brown, from the Rochester Community Design Center, said he did not think people are driving less because of the project, in part because another alternative (like public transit) has not been created. He wanted to see better bus service, and viewed Rochester as conservative in the way it approaches spending, approaching the bus system as an expense rather than an investment (R. Brown, personal communication, February 9, 2024).

Others were more optimistic that the project's bike lanes and improved walkability had slightly reduced car trips. Rory Van Grol noted, *"You know, being in the people business, I do hear and see a lot of folks talk about using cars less and biking more."*

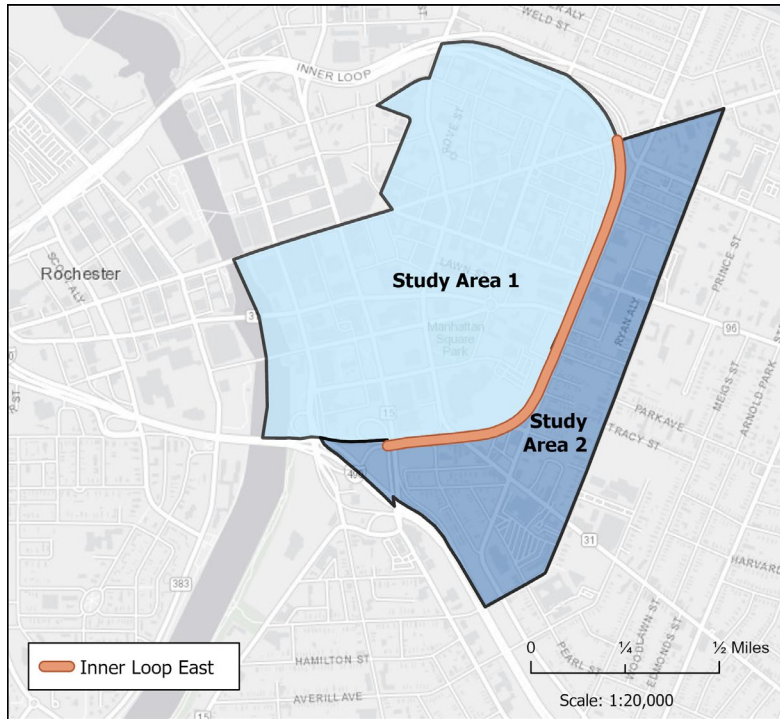
The City has set a goal of promoting multimodal accessibility as part of the Inner Loop North Transformation project. In our interview, David Riley noted that *"about one in four households in Rochester doesn't have access to a private vehicle whether by choice or necessity, and certainly a lot of people who live along the north corridor fall into that camp, so we want to improve the transportation network there for them."* He cited the City's recently adopted active transportation plan and efforts to increase transit service as steps in that direction.

⁸All commentary is their own as private citizens.

Neighborhood Change

I studied the following areas to assess changes in demographics and housing stock before and after the Inner Loop East Project (Figure 22).

Figure 22. Map of study sites (Data Source: US Census, 2024).



The study sites are based on census block groups (Table 4). The boundaries of individual block groups changed between the 2010 and 2020 census, but stayed within the same general boundary which allowed me to combine block groups to create a constant study area.

I used American Community Survey 5-year data and looked at 2013 (data period 2009-2013) and 2021 (data period 2017-2021).

Table 4. Census Block Groups in each Study Area.

Study Area	2013	2021
1	Block group 1, Census Tract 94 Block group 2, Census Tract 94	Block group 1, Census Tract 94.01 Block group 1, Census Tract 94.02
2	Block group 1, Census Tract 93.02 Block group 2, Census Tract 93.02	Block group 1, Census Tract 93.02

Demographics

Population

Rochester’s population remained steady between 2013 and 2021, only increasing 0.2 percent. However, population changes were unevenly distributed across neighborhoods. The neighborhoods in downtown Rochester to the west of Union Street/Inner Loop East (Study Area 1) increased by 4 percent, while the area immediately east of Union Street (Study Area 2) increased by 30 percent in the same time period (Table 5).

Table 5. Change in Population, ACS 5-year Survey Data.

Total Population				
	City of Rochester	Combined Study Area	Study Area 1	Study Area 2
2013	210,624	3,669	2,046	1,623
2021	211,100	4,253	2,137	2,116
% Increase	0.2%	16%	4%	30%

Race

While the total population in the Study Areas increased, the percentage of Black or African American residents decreased by nearly 22 percent, a much higher rate than the City as a whole (Table 6). Much of this can be attributed to an increase in white residents; the proportion of white residents in the combined Study Area increased by 18 percentage points, from 59 percent in 2013 to 77 percent in 2021 (Table 6).

The total number of Black or African American residents in the combined Study Area peaked at 1,096 in 2013 before decreasing to a low of 329 in 2021, which indicates displacement rather than just a change in proportion (Figure 23). The percentage of Black or African American residents in the City as a whole also decreased over the same time period, but by only 3 percent (Table 6).

Figure 23. Black or African American Population in Combined Study Area, 2009-2022 (US Census Bureau, 2024).

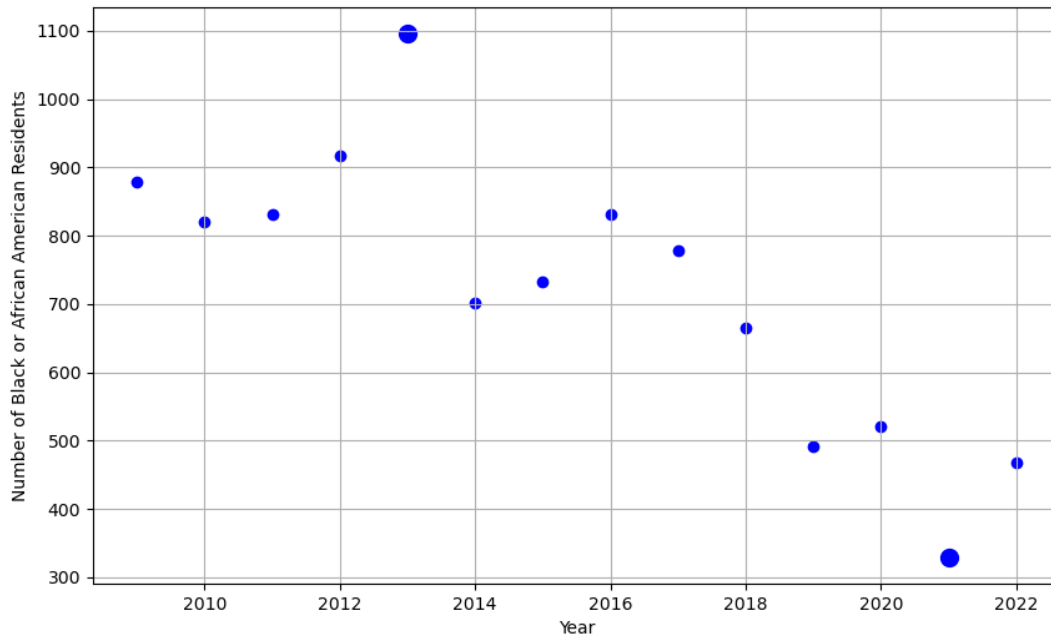


Table 6. Percentage of Total Population by Race/Ethnicity, ACS 5-year Survey Data

	City of Rochester	Combined Study Area	Study Area 1	Study Area 2
<i>Percent White Alone</i>				
2013	45%	59%	59%	59%
2021	45%	77%	76%	78%
Difference	0%	18%	17%	19%
<i>Percent Black or African American alone</i>				
2013	41%	30%	29%	31%
2021	38%	8%	6%	10%
Difference	-3%	-22%	-23%	-21%
<i>Percent American Indian and Alaska Native alone</i>				
2013	1%	>1%	>1%	>1%
2021	1%	>1%	>1%	>1%

	City of Rochester	Combined Study Area	Study Area 1	Study Area 2
Difference	0%	0%	0%	0%
<i>Percent Asian Alone</i>				
2013	3%	5%	8%	1%
2021	4%	7%	10%	4%
Difference	>1%	2%	2%	3%
<i>Percent Native Hawaiian and Other Pacific Islander alone</i>				
2013	>1%	0%	0%	0%
2021	>1%	0%	0%	0%
Difference	0%	0%	0%	0%
<i>Percent Some other race alone</i>				
2013	6%	3%	1%	6%
2021	6%	2%	2%	3%
Difference	0%	-1%	1%	-3%
<i>Percent Two or More Races</i>				
2013	4%	3%	2%	3%
2021	7%	6%	6%	6%
Difference	3%	3%	4%	3%
<i>Percent Hispanic or Latino</i>				
2013	17%	6%	6%	5%
2021	19%	9%	7%	11%
Difference	2%	3%	1%	6%

Income

The Study area’s median per capita income increased dramatically in comparison to the City as a whole. Median per capita income more than doubled in the Study Area (Table 7). A portion of the change may be explained by the 2020 update to census block group boundaries; the income inequality within Study Area 1 was reflected more starkly in the 2013 census block group boundaries. The City of Rochester’s per capita income also increased over the same period, but only by 27 percent (Table 7).

Table 7. Median Per Capita Income in 2021 Adjusted Dollars, ACS 5-year Survey Data

	City of Rochester	Combined Study Area (based on population weighted average of Study Areas)	Study Area 1 (based on population weighted average of block groups)	Study Area 2 (based on population weighted average of block groups)
2013	\$20,977	\$23,198	\$22,492	\$24,088
2021	\$26,569	\$59,188	\$83,671	\$34,462
Percent Increase	27%	155%	272%	43%

Median household income data are not available for one of the census block groups in Study Area 1 for ACS survey year 2021. However, median household income increased by 30% in Study Area 2 over the study period, while increasing only 11% in the City of Rochester (Table 8).

Table 8. Median Household Income in 2021 Adjusted Dollars, ACS 5-Year Survey Data

	City of Rochester	Combined Study Area (based on population weighted average of Study Areas)	Study Area 1 (based on population weighted average of block groups)	Study Area 2 (based on population weighted average of block groups)
2013	\$35,968	\$29,877	\$27,406	\$32,991
2021	\$40,083	\$59,046 (Study Area 2 + Block Group 1, Census Tract 94.02 only)	\$75,052 (Block Group 1, Census Tract 94.02 only) ⁹	\$42,882

⁹ Median Household Income was not available for Block Group 1, Census Tract 94.01 in the ACS 5-year estimates for 2021.

Percent Increase	11%	Not comparable	Not comparable	30%
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Education

The percentage of residents over age 25 with at least some college education in the combined Study Area increased from 63 percent in 2013 to 85 percent in 2021. Meanwhile, the percentage of residents with some college education in the City of Rochester increased from 52 percent in 2013 to 56 percent in 2021.

Home-Ownership and Property Values

The percentage of renter occupied units (as opposed to owner occupied) decreased substantially from 2013 to 2021 in the combined Study Area (Table 9). However, the total number of renter-occupied housing units increased from 2,883 in 2013 to 3,165 in 2021 (an estimated 282 additional renter-occupied housing units).

Table 9. Percentage of Renter Occupied Units, ACS 5-year Survey Data

	City of Rochester	Combined Study Area (based on population weighted average of Study Areas)	Study Area 1 (based on population weighted average of block groups)	Study Area 2 (based on population weighted average of block groups)
2013	61%	92%	95%	89%
2021	63%	83%	75%	90%
Difference	2%	-9%	-20%	1%

Data on the median value of owner-occupied homes was incomplete for the downtown area (Study Area 1) at the block group level. However, the available data shows that the median value of owner-occupied homes in Study Area 2 increased by 32% from 2013 to 2021 (Table 10). Meanwhile, the neighborhoods north of the Inner Loop experienced an even sharper increase in property values, with median home values in Census Tract 93.01, Block Group 2 (north of the Inner Loop) increasing 118 percent over the same time period. The properties in that block group were likely undervalued in 2013 at a median of \$55,569 (2021 inflation adjusted dollars), and in 2021 had risen to be more in line with property values in Study Area 2 (median of around \$121,000). New investments in neighborhoods north of the Inner Loop, such as the Rochester Public Market expansion (City of Rochester, 2017), as well as the trend of outside investors purchasing houses in the area (Oklobzija, 2022), can help explain the sharp increase in property values. Across the City as a whole, median home values rose by around 5 percent from 2013 to 2021 (Table 10).

The median value of properties in the portion of Study Area 1 that did have data (the downtown area by Inner Loop East) was roughly triple that of surrounding areas, at \$359,900 in 2021.

Table 10. Median House Value in 2021 Adjusted Dollars, ACS 5-Year Survey Data

	City of Rochester	Combined Study Area (based on population weighted average of Study Areas)	Study Area 1	Study Area 2 (based on population weighted average of block groups)
2013	\$88,304	\$303,754 (Study Area 2 + Block Group 1, Census Tract 94 only)	\$471,577 (Block Group 1, Census Tract 94 only)	\$92,191
2021	\$93,100	\$241,338 (Study Area 2 + Block Group 1, Census Tract 94.02 only)	\$359,900 (Block Group 1, Census Tract 94.02 only)	\$121,600
Percent Increase	5%	Not comparable	Not comparable	32%

Rent

Gross rent increased in the combined Study Area from a median of \$813 per month in 2013 (adjusted for inflation to 2021 dollars) to \$1,135 in 2021, a roughly 40 percent increase. The increase was particularly sharp in Study Area 1, the portion of downtown near Union Street (Figure 24). The Study Area had substantially larger increases in median rent compared to the City as a whole, where median rent increased by around 5 percent (Table 11).

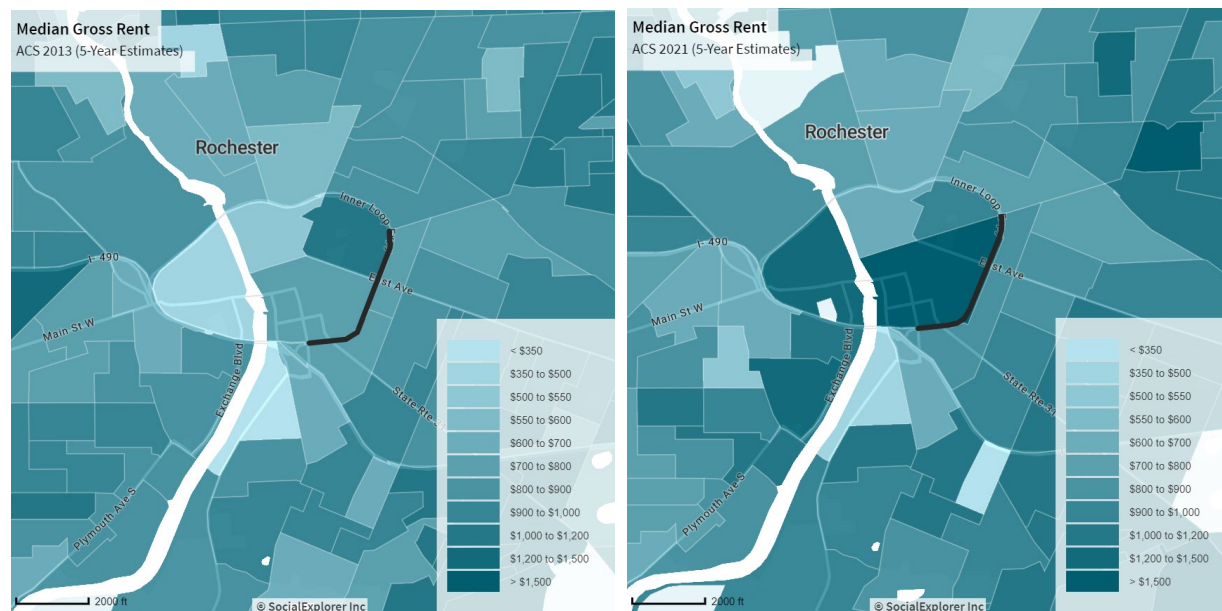
Table 11. Median Gross Rent, ACS 5-year Survey Data

	City of Rochester	Combined Study Area (based on population weighted average)	Study Area 1 (based on population weighted average of block groups)	Study Area 2 (based on population weighted average of block groups)
2013*	\$875	\$813	\$886	\$720
2021	\$915	\$1,135	\$1,379	\$889

Percent Increase	5%	40%	56%	23%
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*2021 Inflation Adjusted Dollars

Figure 24. Median Gross Rent 2013-2021, Social Explorer, ACS 5-year survey (Census block-groups).



Discussion

Common indicators of gentrification include a sharp increase in percentage of highly educated, high-income, and white residents, as well as an increase in property values. While some of these metrics can be positive changes on their own, such as increases in income and property values, collectively they require a closer look to understand if gentrification and displacement are at play.

Relative to the City as a whole, the combined Study Area around the Inner Loop East/Union Street experienced a large influx of high income, college educated, and white residents, which indicates gentrification of the area. Rent also increased at a faster rate in the Study Area compared to the City. Median home values increased in Study Area 2, but not as rapidly as median home values in the neighborhoods north of the Inner Loop.

Some interviewees were confident that the project boosted equity, diversity, and affordable housing options in the neighborhood, without causing displacement. Hinge Neighbors, for example, describe the new housing developments around Inner Loop East as not really displacing anyone due to the low density of residents to begin with, and being a diverse, walkable, high-quality area to live in (S. Mayer & S. Dunwoody, personal communication, November 8, 2023). Several other interviewees also emphasized the diversity of the neighborhood.

One respondent to the Democrat and Chronicle wrote, "Gay BIPOC here and I grew up in this city. I used to live in that area in an apartment and I work in that area now. I agree that the construction there has led to more racial equity because the Manhattan Square apartments now live in a beautiful neighborhood" (Lahman, 2023).

Others disagreed, arguing that while the majority of the new development may be considered affordable by some standards, only a small number are accessible to Rochester's low-income community members, and that developer interest in the area was leading to displacement of existing long-term residents. This displacement can be seen in the decrease in Black residents while high-income, highly educated, white residents increased. The lack of affordability, even for units that meet federal affordable housing requirements, is reflective of a larger trend across Rochester of increasing income inequality and a struggling housing market (czb LLC, 2021). Long-term Rochester resident Miss Moralis said, "*As you build up here, as you close more of the loop in and you're building...who can afford to stay in what you're building? It's gonna have to be the people in the suburbs who are moving here. Who has \$1500, \$2000, \$3000 for an apartment?*"

There was frustration between the different viewpoints, with some advocates of the project arguing that those with concerns about the new development simply misunderstood the situation and lacked understanding of the realities of the housing market. On the flip side, some community members expressed deep mistrust for the politicians, planners and developers involved in the project, feeling that the project was another example of City leadership focusing too much on money and high-income constituents while leaving long term community members and institutions behind (C. Christine, personal communication, April 22, 2024; M. Moralis, personal communication, April 25, 2024). A former tenant's rights organizer I spoke to summed up some of these concerns, saying "*People are worried that the city won't be for them anymore.*"

Gentrification and displacement are an even bigger concern for the ongoing Inner Loop North project, which borders neighborhoods with higher population densities, and to the north of the freeway, neighborhoods with a history of disinvestment. The median household income in the areas bordering the 1.5-mile Inner Loop North is \$16,000 per year (City of Rochester & Bergmann, 2022).

Erik Frish, Deputy Commissioner of Neighborhood Business Development, described the City's relationship with gentrification as complex, noting that white flight left downtown Rochester with a high poverty level, and articulating the view that part of the solution is attracting people with higher incomes back to the City.

So one of our challenges is to actually bring more income back to the city. That means lifting people up and giving people paths to generational wealth building, but also it does mean attracting more people who have means to live in the city...we're lifting and changing our poverty trajectory as a result of that, but...developing projects like this that then lead to increases in rent...which then chase people out - that is something we strive to avoid.

The Lewis Street Community Committee presented concerns around gentrification, along with recommendations, to the City. Their presentation highlighted the issue of out-of-region ownership of homes and “hoarding owners” holding onto vacant lots, demonstrating that existing data on owner occupied units can be misleading (Lewis Street Community Committee, 2021). Their presentation also emphasized the desire for single, owner-occupied homes, and argued that “big buildings push out homeowners which stabilize the neighborhood.” Because of this, the committee, and Hinge Neighbors, advocate for smaller parcel sizes for development of land around Inner Loop North (Lewis Street Community Committee, 2021).

The Lewis Street Community Committee also set forth a series of reparation strategies for Inner Loop North in their presentation, including investing more in the community and building up vacant lots, ensuring community control over outside investors, creating a Community Land Trust, creating a museum to honor the neighborhoods as they were before the original construction of the Inner Loop, and redistributing revenue and land to neighbors who never had income (Lewis Street Community Committee, 2021).

Engagement and Design Process

Much of the public engagement for the Inner Loop East project occurred before the project was funded, through downtown visioning charrettes put on by the Community Design Center of Rochester and the City. These charrettes were where the vision for a two-lane boulevard with bike lanes and mixed-use development first emerged, and helped move the project forward (T. Raymond, personal communication, February 7, 2024). Once the project was funded things moved quickly. Several public meetings were held where design alternatives were presented, and feedback was collected. According to Hinge Neighbors, there were some additional stakeholder meetings that occurred but were not publicized (S. Mayer & S. Dunwoody, personal communication, November 8, 2023). At the time, equity was not a major part of the conversation.

Erik Frisch, Deputy Commissioner of Neighborhood Business Development, and David Riley, Principal Transportation Specialist in the City's Department of Environmental Services, spoke about how the City's priorities have changed from the Inner Loop East project to the ongoing Inner Loop North project. Erik Frisch noted:

The whole conversation nationally has changed on a whole host of issues...nobody was talking 10, 11, 12 years ago, when we were in the throes of design and grants and things, about racial equity, about displacement...the conversation is very different.

Instead, the focus was on development, investment, job creation, cost-benefit analysis, and “not necessarily about the social aspects of what impacts that this highway had on the neighborhoods that it's located in and was thrust upon.”

Erik Frisch emphasized that now the conversation and project goals have changed, saying “Of course, at the forefront now, it's about equity.” David Riley added that,

I think the goals of this project are a little bit different, not because these weren't priorities for the City at the time, but because we had to justify the project in a different kind of way. But there are three overarching goals for the North, and the first one is equitable outcomes... thinking about how to make sure the project meets the needs of existing residents, as well as future wants and trying to minimize displacement...also looking at housing opportunities that will strengthen the existing residential neighborhoods...trying to restore neighborhoods...and invest in them in ways that will support the community.

Interviews with Hinge Neighbors illuminated factors that influenced (and limited) the public engagement efforts around the first portion of the project, Inner Loop East. Funding, both amount and type, was a major barrier to more comprehensive engagement. The project received “fast funding” as part of a TIGER grant that had to be completed within 18 months, which would not have been sufficient time for a comprehensive community-led design process. In order to ensure the newly available land would not sit vacant after the freeway was removed, city officials wanted the support of a large developer who

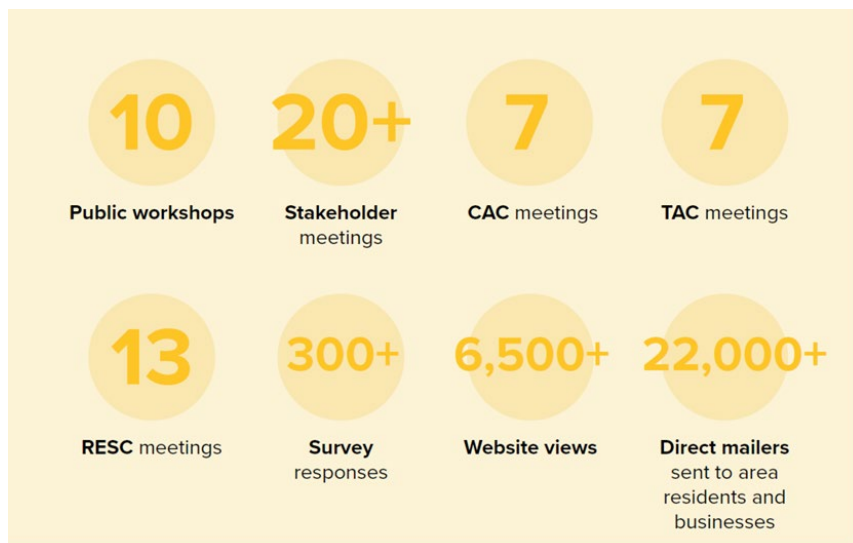
could win HUD funding (S. Mayer & S. Dunwoody, personal communication, November 8, 2023). Rather than set aside smaller parcels and encourage different smaller developers to bid, and allow for community input on what the development and zoning would look like, most parcels were sold to a single major developer in the area. Finally, a decade ago when this project was working towards winning funds, there was less of a top-down expectation for robust community engagement. Newer federal funding (such as funding supporting the Inner Loop North project) comes with more requirements around engagement.

Another factor is the demographics and population density around the project. Hinge Neighbors noted that there were fewer people living directly by the Inner Loop East portion of the freeway, and that displacement was not viewed as a major concern due to the low housing density (S. Mayer & S. Dunwoody, personal communication, November 8, 2023). The neighborhoods around Inner Loop North, however, are more densely populated and have more low-income residents and people of color.

The ongoing project, Inner Loop North, has had a more robust community engagement process, which can be seen in both the city documentation, the hiring of a consultant group specializing in engagement, and the creation of a Community Advisory Committee. This is, in part, a reaction to the first project; Hinge Neighbors began organizing around the Inner Loop North project in response to the lack of community input opportunities for other projects. They wanted to ensure that the surrounding neighborhoods had a say and did not trust the City to do the work themselves (S. Mayer & S. Dunwoody, personal communication, November 8, 2023).

Figure 25. Community Engagement Efforts for the Inner Loop North Project (Slide from the final CAC presentation; Community Advisory Committee, 2022).

Engagement for the Inner Loop North project has been split into two parts; the first part focused on the Scoping Study and street design (this part is complete), and the second part revolving around land use and development (underway). Figure 25 shows the outreach that was conducted as part of the Scoping Study.



While there is a heavier emphasis on equity as a priority for the Inner North Loop Project, including the formation of a Racial Equity Subcommittee within the Community Advisory Committee, the City’s strategies to achieve that goal are not specific. For example, three of the equity-related goals that came out of the advisory committee are:

1. Ensure project outcomes support needs of the full spectrum of existing and future residents, eliminating disparities;
2. Minimize / prevent displacement of existing businesses and residents; and
3. Identify new housing opportunities and strengthen existing residential neighborhoods (Community Advisory Committee, 2022).

The Inner Loop North Scoping Study states that “The study area is well-positioned, perhaps more than anywhere else in the city, to add mixed-income housing units while minimizing risk of displacing existing residents and while maintaining a large supply of low-income units,” and cites existing high concentrations of affordable and income-qualified housing as a “a buffer of protection against potential rent and housing price increases as a result of new development in the immediate area” (City of Rochester & Bergmann, 2022).

The study highlights expected benefits of developing new mixed-income housing, such as attracting middle- and higher-income residents, underwriting market-rate units, and encouraging the development of additional uses like business, retail, arts and culture, and entertainment. It also emphasizes that residents will not experience direct displacement as a result of building new mixed-income housing, “because redevelopment will occur almost entirely within the existing transportation right-of-way” (City of Rochester & Bergmann, 2022).

Despite emphasizing that displacement is not a large concern, the study does also suggest that the City could encourage the incorporation of affordable housing units in new developments through RFP requirements, and could “consider proactive strategies to support existing renters and homeowners and to help maintain and improve existing housing stock” (City of Rochester & Bergmann, 2022).

In my interview with Erik Frisch, he emphasized the importance of trying to get ahead of displacement, especially in the Marketview Heights neighborhood, and cited developing housing opportunities in that neighborhood and investing in the neighborhood in advance of the Inner Loop project as setting the stage for that (E. Frisch & D. Riley, personal communication, February 29, 2024).

When asked about what strategies were in place to minimize/prevent displacement of existing businesses and residents, both the City planners and Hinge Neighbors said that they are still working on figuring that out in the next phase of engagement. I was unable to get in touch with the project leads for the next phase of community engagement around land use, who may have been better positioned to speak on how that will be addressed.

Despite the increased efforts around community engagement and equity, there is still a great deal of mistrust between community members and the City. When asked to what degree the City is considering racial equity and the history of the freeway demolition when it comes to decisions about the new land, one person said, *“I don't think they've been thinking about it until they were approached by Hinge and other folks...until they were told they had to be.”*

Limitations

Limitations of this study include the following. All interviews were conducted remotely, either over the phone or on Zoom, and the study did not include any site visits. Additionally, over half of the people interviewed were recruited through Hinge Neighbors, which may have influenced the perspective of the study.

Data limitations include the changes in census block group boundaries across the study period, the lack of bike and pedestrian counts before 2014, lack of direct air quality measurements within the Study Area, and the lack of finer resolution asthma-related ED visit data.

The study provides insights into the changes that occurred in the neighborhoods surrounding the Inner Loop East Transformation project; further research can investigate how much the Inner Loop East Transformation project contributed to gentrification and displacement as opposed to other development in the area.

Conclusions & Recommendations

Project Impacts

The Rochester Inner Loop East Transformation project succeeded in improving mobility and connectivity, generating economic revenue, and creating new affordable housing units. It likely also contributed to gentrification in the area and displacement of Black and low-income residents.

Lessons Learned

Street Design and Mobility

The Inner Loop East succeeded in restoring the grid and increasing pedestrian and bike mobility. However, mobility and connectivity could have been further improved with more human-centered design, including narrower streets and better pedestrian infrastructure. As the Community Design Center of Rochester put it, *“Although this project was a great step in the right direction, in the final analysis a people first infrastructure was not fully attained”* (Raymond & Magi, 2018).

Two important lessons to take forward into future projects are:

1. Boulevards do not necessarily require the same vehicle carrying capacity as the freeway they replace; traffic will reroute and disperse across the grid.
2. To reduce VMT and congestion, improvements to alternative transportation modes (for example, bus service) should be implemented in tandem with freeway removal to support mode shift.

Air Quality

Particulate matter decreased in downtown Rochester over the study period. Further measurements would be needed to be able to attribute those reductions to the project, as roadway particulate matter concentrations generally decrease to background levels within around 500-600 feet (EPA, 2014).

Asthma-related emergency department visits increased during project construction years, highlighting the importance of more stringent air pollution mitigation efforts during freeway removal projects.

For future projects, substantially reducing traffic-related air pollution will require removing freeways with higher traffic volumes.

Gentrification and Displacement

Potential for gentrification and displacement around Inner Loop East was not seriously considered at the time of the project, in part because of the low residential density of the area. However, there were

residents in the surrounding neighborhoods, and the sharp decline in the number of Black residents from 2013 onward indicates that the investment in the area likely did contribute to displacement.

When it comes to the ongoing project, Inner Loop North, gentrification is already a concern among residents. Neighborhood groups like the Lewis Street Community Committee are advocating for anti-displacement strategies such as a Community Land Trust and measures to ensure community control over outside investors, as well as reparative policies and increased investment in neighborhoods north of the Inner Loop (Lewis Street Community Committee, 2021).

The Inner Loop project is part of a larger context of policy and investment in the area, and to be effective, anti-displacement strategies should be put in place in advance of new investment/development, ideally as part of a city-wide effort that includes monitoring of gentrification and displacement indicators. Hinge Neighbors noted in an interview that land grabbing is already an issue in advance of the Inner Loop North project, as investors realize property values will rise (S. Mayer & S. Dunwoody, personal communication, November 8, 2023). Housing advocates in Rochester are seeking city-wide anti-displacement measures such as eviction protection measures and rent stabilization (Fanelli, 2023).

For future highway removal projects, as well as other major investments that may influence property values and the local housing market, cities should begin conversations about anti-displacement strategies early on in the process. In addition to wider anti-displacement policies, this could include neighborhood-specific strategies like the development of community benefits agreements or community land trusts. A recent white paper on Anti-Displacement Strategy Effectiveness found that “neighborhood stabilization and tenant protection policies have the most direct and immediate effect on mitigating displacement,” and are necessary measures in addition to creating and preserving affordable housing stock (Chapple & Loukaitou-Sideris, 2021). Neighborhood stabilization measures include rent control, community benefits agreements, rental assistance programs, foreclosure assistance, tenant right to counsel, and “just cause” eviction policies (Chapple & Loukaitou-Sideris, 2021).

Land Use and Affordable Housing

Decisions around the use of newly developable land parcels are controversial and require a thoughtful and proactive community engagement process. This was not a major focus in the community engagement and design charrettes that were held in preparation for the Inner Loop East project, but is the focus of the next phase of engagement around the Inner Loop North Project. There are several core issues that emerged as high-priority in reaction to the Inner Loop East Project:

1. Housing density and opportunities for ownership
2. Mix of market rate vs. affordable housing
3. Architecture/design standards
4. Public gathering spaces and greenspace
5. Specific community needs (e.g., grocery store)

Cities embarking on similar projects should conduct focused community engagement around land use and affordable housing issues and develop clear city priorities. If there is a mismatch between community desires and what the City views as realistic to pursue, I recommend creating opportunities for public dialogue about those disconnects.

Creative Design & Engagement

The opening up of new parcels for development creates a unique opportunity for cities to pursue creative, community-led design ideas that build stronger social networks. When interviewing residents about the Inner Loop Transformation Project, I found that people became animated when asked to freely describe what they would like to see in their community. Their ideas, as well as feedback collected by Hinge Neighbors and other engagement efforts, often included public gathering spaces. For example, the Lewis Street Community Committee suggested adding cooking grills for neighborhood use in the Inner Loop North development (Lewis Street Community Committee, 2021). The approach Hinge Neighbors took to engagement, which involved holding events that met people where they were, was effective in encouraging this type of creativity and envisioning at the neighborhood scale. For future projects, I recommend that cities focus on similar outreach styles that focus on neighborhood-level organizing and elevating community advocates into positions of influence in the city planning processes, such as an advisory committee. Even relatively minor design choices can create a more welcoming and livable space for existing residents and communities, and future projects should focus on implementing community-based design ideas.

Future Research

Freeway removal projects offer the potential to reconnect communities, reduce automobile dependency, and open up land for development of housing, parks and other public space, and businesses. The amount of benefit a project has, and who experiences those benefits, depends largely on how it is implemented.

Future research can assess whether freeway removal projects ultimately reduce vehicle miles traveled, and the effects on air quality using hyperlocal measurements. Additional research on effective strategies for equitable decision making and anti-displacement measures around newly created lots for development is also needed, particularly related to freeway removal projects. Case studies to look towards include the Bring Back 6th and Rethinking I-94 campaigns in Minneapolis, as well as Interstate 244 in Tulsa, where local advocates are working to establish a community land trust for land reclaimed from freeway removal (CNU, 2023).

Community engagement for the Inner Loop North Transformation is ongoing in Rochester, and the final design and engineering aims to be completed by 2026 with construction and development beginning in 2027.¹⁰ Future research can assess how the project impacts differed in more densely populated

¹⁰ Inner Loop North Schedule. <https://www.innerloopnorth.com/resources>

neighborhoods, and whether the increased level of community engagement succeeded in influencing the City's land use and development decisions. It will also be important to follow the City's strategy for investing in surrounding neighborhoods while avoiding displacement of existing residents.

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Appendix A

2016 RFP Design Guidelines

Inner Loop East Design Guidelines

The lands created by the Inner Loop East Transformation project offer an unparalleled opportunity for city building. Well-designed development of the new sites will mend the urban fabric and reconnect neighborhoods that have been divided by an expressway for over half a century.

The new development shall:

1. Be forward looking yet acknowledge the context and scale of urban Rochester, in general, and the East End neighborhood in particular;
2. Incorporate publicly accessible open/green space. There are opportunities (in order or preference) on Site 2 at the corner of East Avenue and Union; and, on Site 2 by continuing the Vine Street corridor; and/or on Site 5 by continuing the Buena Place corridor;
3. Connect to and reinforce adjacent neighborhoods and public spaces, especially Dr. Martin Luther King Jr. Memorial Park and the future expansion of Strong Museum of Play;
4. Consist of buildings that are truly urban;
 - a. Appropriate scale bulk and massing
 - b. Variety in building massing and facades; the goal is to prevent monolithic structures
5. Have active first floor spaces;
 - a. Reinforce East Avenue retail corridor with retail space
 - b. Employ creative approaches to first floor activity. This can include retail or office space, live-work space, and/or ground related residential or other flexible space that can be easily modified should market demands change
 - c. Frequent and active building entrances for pedestrians
 - d. Surface parking or first floor interior parking are usually not considered an active space
6. Not propose additional vehicular crossing of the new Union Street separated bicycle lane (cycle track);
7. Have architectural features to reinforce prominent corners and gateways, especially the intersection of East and Union;
8. Use high quality materials;
 - a. Authentic clay brick
 - b. Stone and cultured stone
 - c. Full height glass storefronts (where retail is proposed)
 - d. Terra cotta
 - e. Wood
 - f. Metal
9. Support and build upon the Strong National Museum of Play: a nationally and internationally known institution located within the neighborhood.