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Redesigning the Scajaquada Expressway

Abstract

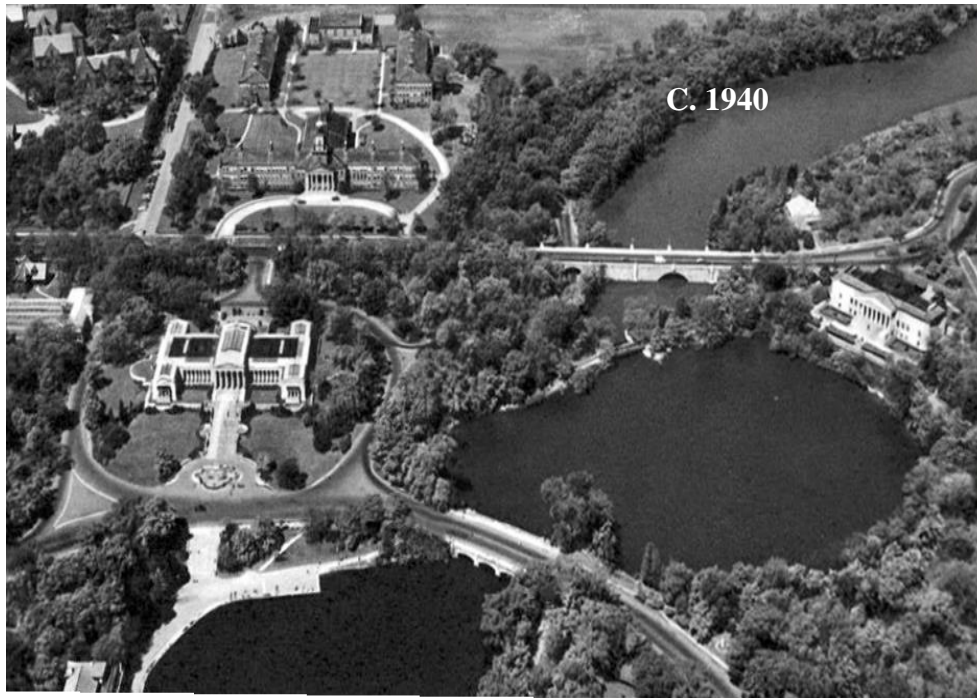
The Scajaquada Expressway was constructed in the early 1960's and is now at the end of its functional life. The redesign and rebuilding of the roadway offers the opportunity to make it less dangerous and more compatible with the natural, historic, and cultural fabric of the parks, parkways, neighborhoods, schools, colleges, and museums it serves and impacts.

Keywords

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Redesigning the Scajaquada Expressway

Daniel Cadzow and Justin Booth



Elmwood Avenue,
Lincoln Parkway,
and Delaware Park,
circa 1940 and 2013.

Before the construction of the Scajaquada Expressway in the 1950s, Delaware Park and the surrounding neighborhoods reflected Frederick Law Olmsted's vision.

Since then, Buffalo has struggled to restore the Olmsted plan and cope with the damage done by the Expressway to safety, health, and neighborhood vitality.

Overview

The Scajaquada Expressway was constructed in the early 1960's and is now at the end of its functional life. The redesign and rebuilding of the roadway offers the opportunity to make it less dangerous and more compatible with the natural, historic, and cultural fabric of the parks, parkways, neighborhoods, schools, colleges, and museums it serves and impacts.

In 2005, the City of Buffalo, in collaboration with the New York State Department of Transportation (NYSDOT), released an Expanded Project Proposal (EPP) for the Expressway. After that NYSDOT carried out numerous studies and sought public input. Despite increasing public calls for a redesigned expressway, the project languished for over a decade. Moreover, the options proposed by NYSDOT changed drastically over time – offering substantially less to the surrounding communities. In 2005, plans included bike lanes, sidewalks, crosswalks, roundabouts, and a 30 mile per hour speed limit. By March of 2013, most of these features were removed and the proposed speed limits were 40 or 45 miles per hour.

While NYSDOT is obliged to prioritize a certain “level of service” for vehicles, the affected communities have different needs and priorities. This policy brief is meant to serve as a guide to some of the issues that should be considered in the reconstruction and redesign of this expressway. The redesign has become more pressing because of an

Executive Order from Governor Cuomo reducing the speed limit – following an avoidable tragedy in May 2015, in which one child was killed and another permanently injured in Delaware Park by an expressway motorist.



Figure 1: Pedestrian in the Expressway

Background

Officially, the 3.6 mile Scajaquada Expressway (NYS Route 198) is a four-lane divided highway with grade-separated interchanges. However, the intersection

with Parkside Avenue and the entrance and exit “slip ways” from Humboldt Parkway, which experience the highest accident rates along the corridor, are not grade-separated. Prior to the Expressway’s construction, the traffic was served by Humboldt Parkway and Scajaquada Drive, with speed limits of 30 miles per hour and 15 miles per hour, respectively. Thanks to large volumes of traffic data now available, engineers now know that increasing infrastructure for vehicular traffic does not tend to reduce congestion. Building and widening roads actually “induces demand” until a similar level of congestion is again achieved. It is not just the workday commute; increased traffic infrastructure also changes people’s ideas about where they are willing to drive, for example, to get a haircut or buy groceries.¹ This makes adhering to a vehicular “level of service” an arbitrary goal, because the number of cars will depend on what type of road is built and what type of demand is induced.

In 2005, the City and NYSDOT conducted a study known as the Expanded Project Proposal (EPP) to analyze the feasibility of downgrading the Expressway between Parkside Avenue and Grant Street. The purpose of this study was to find a way to redesign the roadway so as to alleviate the negative impacts it has had on the community. With significant public input, the EPP established a preferred design alternative that reduced the vehicular speed to 30 miles per hour, improved the aesthetic of the roadway, and incorporated pedestrian crossings and bicycle lanes. The EPP study indicated that this preferred design alternative would greatly improve connectivity and both access and overall quality of life for residents and park visitors, while having little to no impact on vehicular travel times through this short stretch of roadway.



Figure 2: Pedestrian in the Expressway

Based upon the EPP, The NYS Department of Transportation (NYSDOT) began conducting an Environmental Impact Assessment for this project. However, NYSDOT expanded the EPP’s purpose and needs statement to include such requirements as ensuring the Scajaquada Expressway would continue to be used as a “feasible and prudent urban arterial” and that the project would “not

significantly erode the existing level of service” for motor vehicles. Due to these changes, NYSDOT deemed the EPP’s preferred alternative infeasible. They instead chose a preferred alternative that focuses on improving traffic flow for vehicles to alleviate congestion during peak travel times and largely ignores the community’s vision.

Freeway Removal Lessons Learned

There are a number of examples of urban freeway removals in North America, including Rochester, Niagara Falls, New York City, San Francisco, Chattanooga, and Milwaukee. No two are exactly alike, but each offers important lessons.

- **Reduction of roadway capacity reduces the number of auto trips.**

Decreasing auto trips yields a number of social and environmental benefits:

- decreased energy usage and carbon emissions;
- improved air quality and public health;
- increased safety for motorists, pedestrians and cyclists;
- a reduction in fumes and noise pollution; and
- more cost-effective use of existing transit capacity.



Figure 3 Street sweeper attempting to clean large volumes of traffic dust adjacent to a residential neighborhood. Dust generated along expressways comes from exhaust as well as tire wear, asbestos from brake dust, road paints, and organic dust contaminated by fluids that leak from vehicles.

- **Spillover traffic can be absorbed.** The amount of traffic that can be

accommodated through alternate routes, with the appropriate demand management and land use strategies, may be higher than previously believed. Gridded street patterns, like those in Buffalo, are especially effective at accommodating the traffic that remains once capacity has been reduced. Studies have shown that adding capacity to a route like the Scajaquada can actually increase congestion by funneling traffic into a single direct route, rather than distributing it over a complete network.²

- **Expressway removal does not require a major shift to transit.** Traffic will find alternate routes, and travelers will choose the most convenient mode for their trips or travel at different times or to different locations.
- **Expressway removal has a catalytic effect.** Excess right-of-way can often be redeveloped or converted into civic amenities such as open space. Even where this is not the case, the positive impacts of expressway removal tend to be felt over a broad area. Surrounding property values increase, neighborhoods become more attractive to investors and visitors. Crime – and fear of crime – can be reduced through increased foot traffic and the elimination of shadowy hiding locations. None of the cities studied noted any long-term negative economic impact, even to areas that had been directly served by the expressway.
- **Design is key.** It is not enough to merely replace a grade-separated roadway with an at-grade street. A “complete street” design that seeks to accommodate all users and implements traffic calming techniques is essential. Design decisions should be guided by concerns about equity and efficient, sustainable use of transportation supply.



Figure 4: Youth Crossing the Expressway

- **Reductions of roadway capacity must be managed, mitigated and monitored over time.** Expressway removal is not just a one-time demolition project. To be effective, it requires a long-term commitment and a thorough, integrated approach - one that constantly observes conditions and designs solutions for all users.
- **Expressway removal should be undertaken only after careful consideration of trade-offs.** Even under the most favorable circumstances, expressway removal is not a panacea for urban ills.

Inevitably, it will require sacrifices for some. By displacing traffic onto at-grade roadways, it may prove challenging to pedestrians; to the extent that it reduces auto mobility, it may promote some types of businesses over others. In any case, a civic conversation about competing values must take place. Reduced auto mobility for some trips may be acceptable if other values, such as quality of life and economic development, are prioritized.

- **Expressway removal should be part of a larger strategy.** Removals are most effective when they are one element of a comprehensive, clearly articulated civic vision for enhanced quality of life, sustainability and economic development that leverages the opportunities made available by removal. For all of its potential benefits, expressway removal should not be seen as an end in itself, but rather a means to advance greater goals.

Health and Safety

We were born and raised in a car-oriented culture. As such, we often take for granted the dangers that motorized traffic presents. According to the Center for Disease Control, 33,804 people died from motor vehicle traffic deaths in 2013 – almost 200 more deaths than all deaths related to firearms the same year.³ And unfortunately, the Scajaquada Expressway is a particularly dangerous roadway.



Figure 5: Rollover accident on the Scajaquada Expressway at Parkside Ave

Accidents

Approximately 25 percent of intersections and ramps on the Scajaquada have accident rates higher than statewide averages for similar types of intersections and ramps. Roughly 50 percent of mainline sections have accident rates higher than the state average. The location with the highest number of accidents is the intersection with Parkside Ave – accounting for roughly 30 percent of the accidents on the Expressway as a whole.⁴

Specific information about accidents is not generally available to the public. However, accidents at this intersection are illustrated in an April 9, 2014 DOT

document, a portion of which is shown below.⁵ Making the entire corridor as safe as possible must be the first priority in the redesign.



Figure 6: NYSDOT Map of Accidents near Parkside Avenue Intersection

Speed Limit

It is well documented that the likelihood of a pedestrian being killed when struck by a motor vehicle increases with speed. Two studies of documented cases where pedestrians were struck by motor vehicles revealed that:

- at 20 miles per hour, roughly 5 percent of struck pedestrians were killed;
- at 30 miles per hour, roughly 40 percent of struck pedestrians were killed;
- at 40 miles per hour, over 80 percent of struck pedestrians were killed.⁶

To date, no data has been released about Scajaquada Expressway's accident rates since the speed limit was lowered to 30 miles per hour. However, nearby residents have observed a marked decrease in collisions. Much of the Expressway is at grade, with numerous pedestrian facilities such as sidewalks and bike paths. Thus, it is imperative that the current speed limit, set at 30 miles per hour after the

tragic collision in Delaware Park, not be raised. As illustrated in the photographs accompanying this brief, pedestrians are at particular risk in the eastern section, which is surrounded by a densely occupied neighborhood, two colleges, a hospital, a subway station and Delaware Park. The Expressway is an eight-lane barrier to the many pedestrians and cyclists that use the area, and the lack of safe crossings lures many into jaywalking across all eight lanes.



Figure 7: Youth in the Expressway

Air and Water Pollution

A topic that has been largely absent from the Scajauada Corridor discussions is traffic pollution, which kills even more people than accidents – accounting for 53,000 premature deaths in the U.S. each year.⁷ Vehicles contribute as much as 90% of the air pollution in typical urban areas.⁸ Researchers have linked traffic pollution to diseases such as asthma, cancer, and heart disease. Scientists have also found connections with many other conditions, including autism, obesity, lower IQ, anxiety, and depression.⁹ Last, but hardly least, transportation creates 27% of the nation’s greenhouse gas emissions.¹⁰ Physical and vegetative barriers have been proven to reduce traffic pollution and should be used wherever large volume roadways pass by neighborhoods, schools, hospitals, and parks.

It is also important to design roadways to minimize the storm water runoff which, in older cities like Buffalo, is combined with sanitary sewage. When rain falls or snow melts, the combined sewage overwhelms the water treatment plants, causing millions of gallons of raw sewage to be dumped into Lake Erie and Niagara River. In 2012 alone, approximately 44,000,000 gallons of untreated sewage entered our waterways this way.¹¹ Storm water runoff should be treated naturally with rain gardens and wetlands throughout the corridor. The natural vegetation and bacteria found in wetlands are great at absorbing a number of pollutants and metals into relatively inert substances; thus, vegetation and bacteria from existing, healthy wetlands should be used to seed wetlands established as part of this project.¹²

One Corridor

Scajaquada Expressway was intended to connect Interstate 190 and Kensington Expressway (NYS 33). However, recent NYSDOT studies have shown that only about 15 percent of vehicles make that entire trip. In other words, the primary reason for building the Expressway turned out to be misguided.

More important to the city are other sets of connections in this natural and cultural corridor: in particular, Scajaquada Creek and the Scajaquada Pathway, which connect the neighborhoods and the Olmsted Parks system to the parks and pathways along the Niagara River. The Creek and Pathway also unite the numerous and mutually-interdependent cultural institutions, parks, schools and colleges, neighborhoods and businesses along the corridor, including the Buffalo Zoo, Albright Knox Art Gallery, Buffalo History Museum, Buffalo State College, Medaille College, and many more.

The eastern section of the Expressway (Route 33 to Elmwood Ave), which destroyed Olmsted's Humboldt Parkway, bisects Delaware Park and cleaves in two the most densely occupied residential section of the corridor. The western section (between Elmwood Ave and I 190) is occupied by a large, elevated concrete roadway which isolates Buffalo State College from Scajaquada Creek and the Amherst Street business district and severely compromises the appeal and utility of the Scajaquada Pathway that serves both. It is grossly overbuilt and is a barrier to redeveloping the nearby brownfields. It also will detract from the \$850,000 park that is in the early stages of planning and construction at Scajaquada Creek's outlet into Niagara River.

By redesigning the Scajaquada, we can create a much stronger backbone of cultural, historical, natural, economic, and community assets that can further propel Buffalo along its path of revitalization.

Complete Streets

With the help of GOBike Buffalo, in 2008 the City of Buffalo instituted a Complete Streets law. Similarly, New York State passed a Complete Streets law that went into effect in 2012. This means that when a roadway is constructed or repaired, equal consideration must be given to commuters of all kinds. This includes bicyclists, pedestrians, public transportation users, children, the elderly, and the disabled. Scajaquada Corridor is no exception. It is not in keeping with the Complete Streets Initiative to install a patchwork of pedestrian and cyclist

facilities where convenient, rely on nearby facilities when available, and abandon the principle where difficult.

Businesses and cultural institutions do not thrive just because trucks can deliver goods to them. They also need consumers traveling by car, bus, bike, or foot. Numerous studies have shown that non-motorized consumers spend as much, if not more, as motorized consumers. And businesses do not suffer when they cater to pedestrians and bicyclists, even if it means sacrificing motorized transportation infrastructure such as parking spaces.¹²



Figure 8: Pedestrian in the Expressway

The Road Ahead

The Scjajaquada Corridor includes many of Buffalo’s most important, cultural, historical, and natural features. Buffalo needs transportation infrastructure that fosters the mutual support and development of its neighborhoods, schools, parks, museums, and colleges. The intrusion of motor vehicle travel through Delaware Park’s historic landscape should be minimized to the greatest extent possible. Humboldt Parkway and Scjajaquada Drive should be restored to human scale, allowing the surrounding communities to reconnect. The corridor must be treated as a whole and not as a patchwork of expedient, low-cost “fixes.” We must demand that our transportation engineers adhere to the same oath as doctors: *first, do no harm*. This includes state of the art solutions to prevent accidents and to protect the air we breathe and the water we drink.

The road ahead need not be extravagantly expensive. The current construction estimates provided by NYSDOT are in the range of \$115 million.¹³ The City of Buffalo’s popular 2005 EPP included a set of interim measures for traffic calming and restoring connectivity, including a 30 mile per hour speed limit, costing only \$5 million. It should be noted that since the 2005 EPP, NYSDOT has spent \$4.5 million conducting its own largely redundant and increasingly unpopular studies. Using the 2005 EPP as a foundation, we can start improving the health, wellbeing and safety of all affected by the expressway. We can reunite divided cultural

landscapes, repair damaged natural features, and improve conditions for economic development. And we do not have to wait another decade or waste more millions on additional studies.

Elected officials, institutions, and over 3,000 individuals have signed on to endorse a Scajaquada corridor that adheres to the following principles:

1. All proven traffic calming techniques should be applied to the project area to establish a 30 mile per hour design speed and create a safe and more accessible urban boulevard.
2. Additional opportunities for public access crossing the Scajaquada via bicycle and pedestrian are needed.
3. Adequate crosswalks with the appropriate safe crossing treatments.
4. The Parkside and Scajaquada intersection should be greatly improved to provide a safer pedestrian crossing for the neighborhood and students from Medaille College that use it; current alternatives do not adequately address this issue.
5. Roadway design and landscape restoration should be employed to minimize the intrusion of vehicle travel through the historic landscape of Delaware Park to the greatest extent possible.
6. The Main Street intersection at the Scajaquada needs to be improved for pedestrians, bicycles and vehicles. Improved access to and exit from the Route 198 corridor at Main Street is a critical part of improvements within the entire corridor. Currently, all pedestrian crossings do not meet the state standard for safety.
7. Create a complete street that accommodates all roadway users; this includes vehicles, commuting bicyclists, recreational bicyclists, recreational joggers and walkers.
8. On-street bike lanes and pedestrian walkways are desired connecting to the citywide network.
9. Gateways should be established within each end of the corridor honoring the historical significance of this area by creating a welcoming and inspiring user experience.

10. Storm water runoff should be treated naturally throughout the entire Scajaquada corridor.
11. Improved ingress/egress from Delaware Park and other facilities is necessary.
12. Establish a long-term maintenance plan with all stakeholders and agencies.
13. Coordination with NFTA to leverage additional investment as a way to encourage alternative modes of transportation and integrate the corridor into the existing metro system.
14. Identify opportunities for additional street connections.

¹ Gilles Duranton, “The fundamental law of road congestion evidence from US cities.” (National Bureau of Economic Research, 2019).

² Ibid.

³ “Fast Stats,” Center for Disease Control, accessed December 14, 2015,
<http://www.cdc.gov/nchs/fastats/injury.htm>.

⁴ City of Buffalo, “Final Report and Expanded Project Proposal: NY Route 198,” June 2005.
Available at https://www.city-buffalo.com/files/1_2_1/Scajaquada/FinalReport/FinalReport.pdf.

⁵ “Accident Locations and Improvements,” accessed December 14, 2015,
<https://www.dot.ny.gov/portal/page/portal/content/delivery/region5/projects/547022-home/547022-repository/07%20Scajaquada%20Accident%20Graphics.pdf>

⁶ “Effects of Vehicle Speed on Pedestrian Fatalities,” accessed December 14, 2015,
<http://humantransport.org/sidewalks/SpeedKills.htm>.

⁷ Daniel Cadzow and Sam Magavern, “Traffic Equity in Buffalo, New York” (Partnership for the Public Good, 2015), available at www.ppgbuffalo.org.

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ T.J. Pignataro, “Heavy rains turn Lake Erie into a toilet,” Buffalo News, May 25, 2013.

¹² Treatment Wetlands, Second Edition. Robert H . Kadlec and Scott D . Wallace. CRC Press 2008.

¹³ “Corridor Information,” NYS Department of Transportation, accessed December 14, 2015,
<https://www.dot.ny.gov/scajaquadacorridor>.