



MEMORANDUM

To: John Norquist, Nora Beck
From: Lucinda E. Gibson, P.E. and Norman L. Marshall
Date: 21 August 2007
Re: Update on Buffalo Skyway Project

This memorandum reports our findings on the current status of the Route 5 and Fuhrmann Avenue projects along Buffalo's waterfront. It evaluates the alternatives for the street system and makes and recommendations regarding appropriate design for Route 5 and Fuhrmann Avenue and the actions required for implementation.

Summary of Current NYSDOT Plans for Buffalo's Waterfront.

The NYSDOT has recently completed the "Southtowns Connector Environmental Impact Study (EIS)" for an extensive project that includes reconstruction of Route 5 and Fuhrmann Avenue (these are parallel routes, Route 5 is a limited-access highway and Fuhrmann Ave is essentially a frontage road), a new connection between the waterfront and I-90, and reconstruction of Ohio Street, which intersects with Route 5. Figure 1 shows the entire project area and the components of the EIS. The project area follows Route 5 from Milestrip Road to the foot of the Skyway Bridge. The Skyway Bridge is not included in the EIS; it is highlighted in Figure 1.

The EIS presents a preferred alternative, titled the "Modified Improvement" alternative, which includes maintaining Route 5 as an embanked facility and re-designing Fuhrmann Avenue as a "boulevard" parallel and immediately adjacent to Route 5 for nearly the entire southern portion of the city of Buffalo's waterfront. Eventually, just north of Lackawanna, further to the south, Route 5 and Fuhrmann Avenue are tied together as a 6-lane arterial. While the Skyway Bridge is not part of the EIS, the "Modified Improvement" alternative supports the maintaining of the elevated bridge without including the bridge in the analysis.

A construction contract that is planned to be released by NYSDOT this fall involves the reconstruction of Fuhrmann Avenue as a "boulevard" and two new interchanges between Route 5 and Fuhrmann Avenue. More illustrations of this plan are shown below in Figures 2 and 4. The NYSDOT preferred alternative maintains the elevated bridge and embanked highway at the expense of valuable waterfront acreage and ultimately does not create the access necessary for making the waterfront a destination connected to downtown.

The NYSDOT Preferred Alternative will have many negative affects on the efforts to develop the Outer Harbor as a vital urban, walkable place to enjoy the Lake Erie waterfront. There are four main reasons why the current NYSDOT plans for Fuhrmann Avenue are all wrong.

- 1) The embanked design of Route 5 is completely incompatible with the goal of replacing the Skyway Bridge with an at-grade crossing to connect the Outer Harbor with downtown Buffalo. With an embanked design, the number of access points is limited. This perpetuates the divide between South Buffalo and the Lakeshore.

Figure 1: Southtowns Connector Project Area



- 2) Route 5 is maintained as a high-speed, limited-access facility, which is not necessary or desirable. Route 5 eventually transitions to an arterial with at-grade intersections, so there is no compelling need for the first several thousand feet of this road to be a limited-access highway. Keeping Route 5 as a limited-access highway takes up valuable waterfront land and maintains high levels of noise--neither of which will be helpful for the redevelopment/revitalization efforts.
- 3) This limited-access design maintains the very poor access to the northern end of the Outer Harbor, further stymieing the economic development and urban revitalization of this important area so close to the downtown. The main objective of the project is to increase access, yet it only adds one point of entry/exit and clarifies another interchange. The investment proposed by NYSDOT greatly compromises the potential for urban redevelopment and economic vitality for the sake of a relatively limited amount of through traffic.
- 4) The analysis is based on traffic volume data prior to the removal of tolls on the NY State Thruway—which makes the through-traffic role of Route 5 even less important. Traffic data has not yet been released that would allow for analysis of the effect of the tolls, but this important change invalidates the modeling that was used to reject the scenario that assumed our preferred alternative (removal of the Skyway Bridge, a new at-grade arterial bridge to downtown Buffalo, and conversion of Route 5 to an at-grade street) would not handle projected traffic volumes.

Alternatives Considered in the EIS

The EIS presents three alternatives that have been concluded to be “feasible”, including the NYSDOT Preferred “Modified Improvement” alternative, the “Boulevard Alternative”, and a “Hybrid Alternative”. The “Boulevard Alternative” is the only alternative in the EIS that eliminates the embanked grade-separated Route 5.

In the EIS documentation, there were a number of additional alternatives and scenarios that were evaluated and rejected, including “scenario 8”, which contains all of the elements of our preferred plan. However, details of their design assumptions and the results were omitted from the “Appendix C: Traffic & Accident Report” for Scenario 8. A supplemental report should be distributed to the public that provides a full description of the analysis assumptions and the results of the travel demand modeling for Scenario 8.

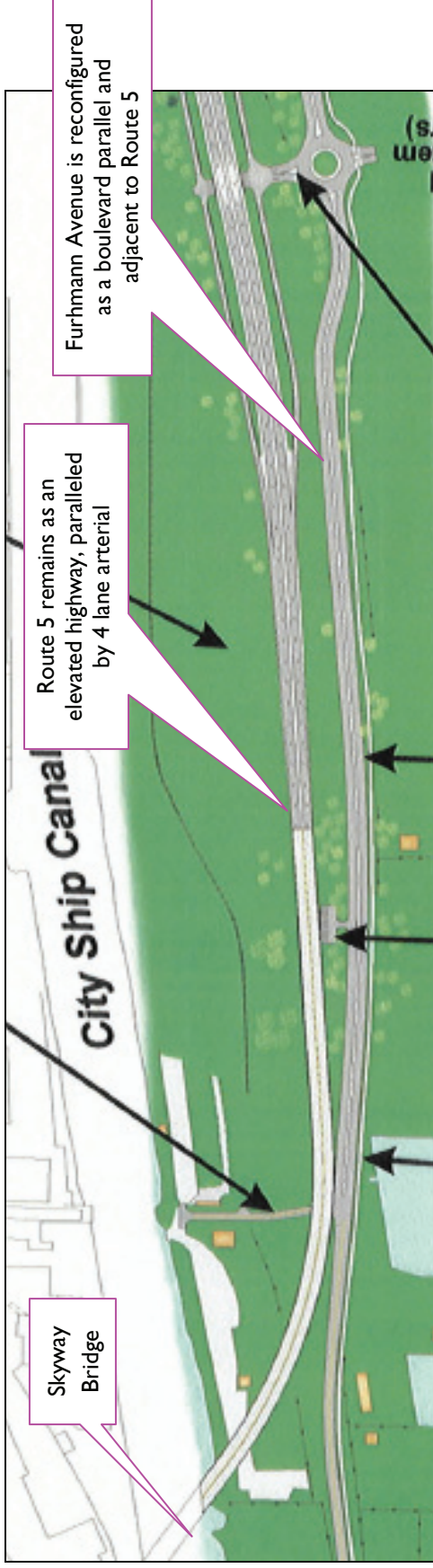
Status of the NYSDOT Preferred “Modified Improvement” Alternative

The status of the EIS is that it is complete, and FHWA has issued a “record of decision” to proceed with their “Modified Improvement” Preferred Alternative. This does not mean that we cannot get them to change things, but it does mean that NYSDOT has been spending money on the wrong design. It is important to stop this from proceeding as soon as possible.

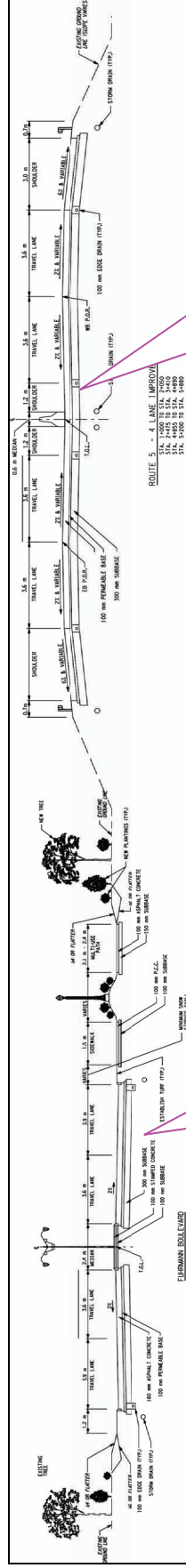
The construction contract under consideration for letting this fall would reconstruct Fuhrmann Avenue as a four-lane “boulevard”, but leave Route 5 as a high-speed freeway. This means that there would be two parallel facilities, which is a waste of limited land and money. Even worse, the design of the boulevard as proposed by NYSDOT will not be able to fulfill the promise for attracting walkable urban redevelopment because it will only have development on one side with limited connectivity to the rest of the city. The other side will have an unsightly, elevated, noisy, high-speed highway.

Figure 2, from the Southtowns Connector EIS, shows the proposed cross-section of Route 5 under the “Modified Improvement” alternative. It is a four-lane, limited-access, high-speed highway with a jersey barrier median and guardrails. This high-speed facility would be paralleled by the Fuhrmann Avenue “Boulevard”.

Figure 2: Excerpt of NYSDOT Preferred Alternative ("Modified Alternative") near Skyway Touchdown



Cross Section of Combined Furhmann Ave Boulevard and Route 5 Limited Access Highway



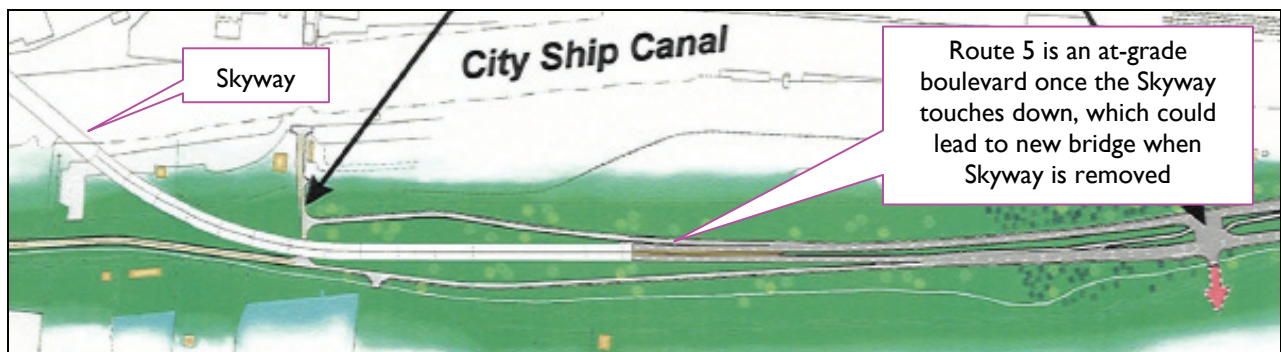
Route 5 remains a limited access highway atop an embankment

Proposed Furhmann Ave Boulevard

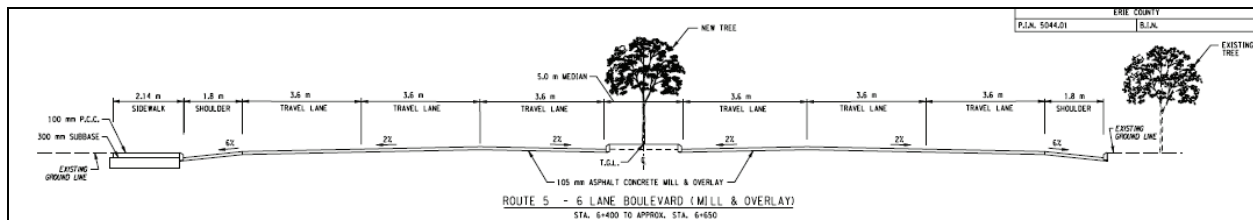
Premature Rejection of the “Boulevard” Alternative

The EIS also considered a “Boulevard” alternative and concluded that this alternative is feasible. But for reasons not stated anywhere in the EIS, it was not chosen as the preferred alternative. The “Boulevard” alternative is far superior to the “Modified Improvement” alternative because it can easily be adapted to the removal of the Skyway Bridge, building a new grade level bridge connection to downtown Buffalo, and reconfiguration of the Fuhrmann Ave/Route 5 corridor into a multimodal street. Because the Skyway Bridge is currently under study to determine options for its future, which should include an exploration of “downsizing” to an at-grade facility, it would be prudent for NYSDOT to pursue the Boulevard alternative at this time, as it is most adaptable to a range of strategies for the Outer Harbor. In the Boulevard alternative, Route 5 transitions from the Skyway Bridge into a single 6-lane boulevard (see Figure 3). This plan is highly compatible with removing the Skyway Bridge and constructing a new at-grade bridge, which could be in one of several possible locations.

Figure 3: NYSDOT Boulevard Alternative near Skyway



Boulevard Cross Section



I have reviewed the EIS for documentation on why the NYSDOT “Modified Improvement” alternative was selected over the “Boulevard” alternative and could not find any discussion of this decision. The “Boulevard” alternative performed essentially the same in terms of traffic operations and better in terms of economic development, because less area is consumed by roadway and can be redeveloped. The only traffic reason that it did not perform as well was that there was a slight diversion of traffic onto I-90 and I-190, due to the boulevard having slightly higher travel time, since it would be a 40 mph street. However, this is a relatively minor issue, especially since there has already been diversion to these roads since the elimination of tolls.

Figures 4 and 5 show another comparison of the two alternatives at the Ohio Street intersection. The NYSDOT “Modified Improvement” alternative includes 8 lanes of pavement in an area where redevelopment is hoped for, with 4 of these lanes high speed, elevated, and noisy. Our preferred alternative would be a four-lane avenue with a design speed of 35 mph. The future traffic projections indicate that 4 lanes would provide sufficient capacity for an urban setting.

Figure 4: NYSDOT Preferred Alternative (“Modified Alternative”) at Ohio Street

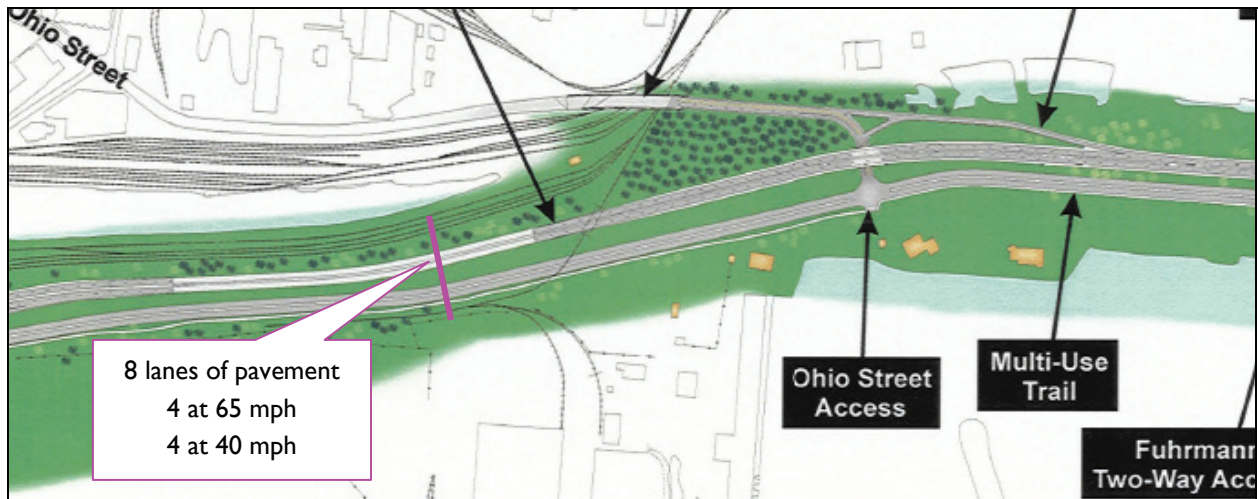


Figure 5: NYSDOT Boulevard Alternative at Ohio Street

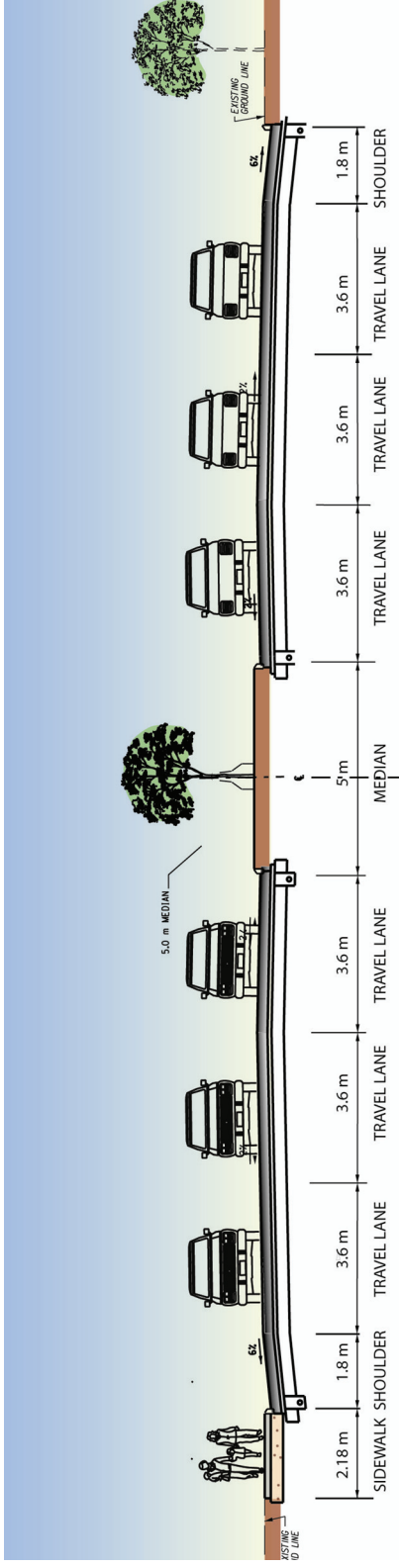


Recommended Design Changes of the Boulevard Alternative

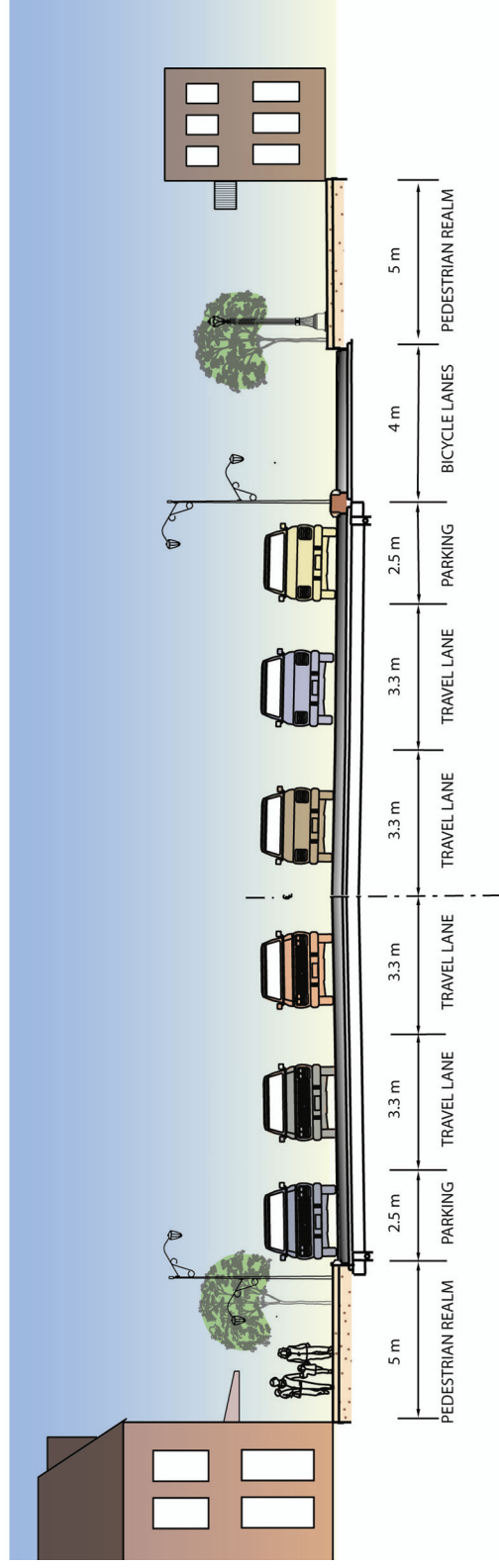
The specifics of the design of the Boulevard in the “Boulevard Alternative” leave ample room for improvement. The NYSDOT design for the “boulevard” is a 6-lane arterial with a landscaped median. The traffic volumes for the boulevard alternative (scenario 7) do not exceed 2,500 vehicles per hour (vph) in the peak hour/peak direction. A four-lane avenue design would provide sufficient peak hour capacity. Further, these traffic projections were prepared before the toll elimination on I-190, so actual traffic volumes are likely to be even lower. Figure 6 compares the proposed NYSDOT “Boulevard Alternative” cross-section of Route 5 with our recommended cross-section as a four-lane avenue. This avenue design is consistent with the guidelines in the recently published *Context Sensitive Solutions for Major Urban Thoroughfares*, a Recommended Practice published by the Institute for Transportation Engineers (ITE).

Figure 7 shows several examples of two-way protected bicycle lanes from Montreal, which has often been considered the most bicycle friendly large metropolitan area in North America.

Figure 6: Comparison of the Proposed NYS DOT Boulevard Cross Section with a Four Lane Avenue Cross Section



Proposed NYS DOT Boulevard Alternative Cross Section



Four Lane Avenue Cross Section

Figure 7: Examples of Separated Two-Way Bike Lanes in Montreal



The design of the boulevard will be critical to achieving the goal of the Outer Harbor becoming a vibrant, urban place. The NYSDOT “boulevard” plan is essentially designed for creating a pleasant, tree-line road to drive through, but it does not support pedestrian transportation nor urban redevelopment. The NYSDOT design assumes that all access will be off from the main boulevard, and does not integrate pedestrians or urban development into its design.

Instead, our proposed cross section shown in Figure 6 would result in a facility that will provide adequate capacity for the moderate volumes of through traffic, and also provide an excellent stage for redevelopment. The plans for a bicycle facility along the Outer Harbor could be integrated into the boulevard design through the areas of focused urban development, in a way that will provide meaningful transportation alternatives, as well as provide an outstanding attraction for both residents and visitors to come to the Outer Harbor without their cars.

The investment in this facility will influence every facet of how the Outer Harbor area grows and develops, and it is critical to develop a proven urban design that will meet the multiple goals of this facility. The NYSDOT plan is too far tilted for providing capacity and service for through traffic. This is not surprising, as their mission is first and foremost transportation. Because the Route 5/Fuhrmann Avenue corridor is also a focus of creating a vibrant urban environment, the design of this facility must consider a much broader range of values.

Grade Level Bridge Connection to the Outer Harbor

Without having an opportunity to visit the site and discuss some of the design complexities with knowledgeable people, it is difficult to make any specific recommendations about where the new grade level bridge would work best. We would also like to see the modeling results of NYSDOT’s analysis of Scenario 8, which was an alternative variant that included all of the basic elements of our preferred alternative. NYSDOT rejected this alternative due to high traffic volumes it would divert to Ohio Street, but this may be due to assumptions that the new bridge would not have sufficient capacity.

Figure 8 shows two possible locations for a four lane lift bridge that would connect to downtown Buffalo in the most direct manner. Either of these would provide much improved access for all modes of transportation to the Outer Harbor area, and would facilitate the goals for economic development.

Figure 8: Possible Grade Level Bridge Connections between Outer Harbor and Downtown Buffalo



Recommendations and Next Steps

1) Stop the construction of Fuhrmann Avenue as designed by NYSDOT's Preferred "Modified Improvement" Alternative.

This alternative is not compatible with removal of the Skyway Bridge and does not serve the redevelopment plans of the Outer Harbor. Also, a review of the current status of the Skyway Bridge should be released this fall. It is simply not prudent for NYSDOT to expend funds to construct an alternative that is designed around the Skyway Bridge continuing in operation before the review is completed and released to the public.

2) Get NYSDOT to change the preferred alternative to the "Boulevard Alternative".

This alternative is concluded to be feasible by NYSDOT in the Southtowns Connector EIS. It is also readily adaptable to a scenario in which the Skyway Bridge is removed and a new grade-level bridge constructed to connect the Outer Harbor with downtown Buffalo. The lower design speeds make it more appropriate for urban redevelopment

3) Redesign the Boulevard Alternative.

The Boulevard Alternative should be redesigned to improve its multi-modal functions and to serve local access to Outer Harbor development as well as through-traffic. The current "boulevard" design is really just a "dressed-up" arterial design with a wide median. It does not provide a good environment for pedestrians or bicyclists, nor does it serve local access. A four lane avenue design should be explored, conforming to the ITE Recommended Practice, Context Sensitive Solutions in the Design of Major Urban Thoroughfares for Walkable Communities.

4) Obtain the analysis details and modeling files for Scenario 8 from NYSDOT.

Scenario 8 was referred to on page 4-2 through 4- 5 of Appendix M: Alternative Screening of the Southtowns Connector EIS. This scenario is the most favorable one for the planned development of the Outer Harbor, yet it has been completely omitted from the EIS documentation. We would like the opportunity to obtain and review the details of the modeling, and the computer files used. This information would help enormously in the re-design and refinement of the Boulevard Alternative. Also, these files will be helpful in considering options for a new at-grade crossing.

5) Proceed with planning for an at-grade bridge crossing after the Skyway Bridge review is released.

There is growing interest in many DOT's of "downsizing" facilities when major facilities are reconstructed, in order to reduce both construction and maintenance costs. The Skyway Bridge and Route 5 corridor are ideal candidates for consideration of downsizing, as it serves only moderate volumes of traffic, and requires substantial maintenance costs. Its replacement with a less expensive at-grade bridge not only serves the Outer Harbor area in a more appropriate manner, but could reduce future maintenance needs.