

CASE STUDIES FOR PLANNING AND DESIGN PROJECTS

I-895/Sheridan Expressway

	Sheridan Expressway	I-81
Type	at grade highway	existing elevated highway - TBD
Interstate Highway?	yes	yes
Through Traffic?	yes	yes
Vehicles /Day	41,000	100,000
Project Length	1.25 miles	1.4 mi.
Context	urban core	downtown
City	Bronx, NYC, NY	Syracuse, NY
Population	1,373,659 (Bronx only)	140,658
Project Stage	EIS	planning
Estimated Cost	\$413 million	unknown

Regional Context



Project Location



The Sheridan Expressway was the only completed segment of a highway that was intended to run parallel to the Bronx River Parkway through the Bronx and Westchester County. The highway is at grade level and runs along the shoreline of the Bronx River between the Bruckner and Cross Bronx Expressways. There is currently an ongoing EIS for improvements to the Bruckner Expressway, an elevated highway which has an interchange with the Sheridan. A coalition of local environmental, religious, and social equity organizations has created a plan to redevelop the Sheridan corridor with housing, a riverfront park, and alternative transportation choices. The EIS process has prompted calls by the community to eliminate this interchange and “de-commission” the Sheridan, which has low traffic volumes, especially by New York City standards. This would allow the redevelopment of the riverfront as envisioned by the community.

What was the decision-making process?

This project has benefited from a highly engaged community. A coalition of groups, including the South Bronx Watershed Association, Sustainable South Bronx, Youth Ministries for Peace and Justice, Tri-State Transportation Campaign, and Mothers on the Move, has been engaged in the New York State Department of Transportation (NYSDOT) EIS process since it began. The community worked to develop a comprehensive vision for the area, with transportation improvements and economic and residential development (see site plan on the following page), and have been seeking alternative designs that will allow the implementation of this plan.

The community vision alternative was in jeopardy early in the EIS process based on the outcome of a highly quantitative, technical analysis of alternatives. The community alternative, which included removal of the Sheridan along with street and transit improvements, ranked poorly in the traffic modeling results, which indicated high levels of congestion. An independent analysis of the modeling results concluded that a modeling error explained the disproportionate levels of congestion for the community vision alternative. In addition, the economic impact analysis did not include any of the economic benefits from the envisioned redevelopment of the Bronx River waterfront, further slanting the technical analysis against the community vision alternative. NYSDOT proved to be responsive to these concerns, and revised their traffic and economic analyses accordingly. .

In the next phase of the public involvement process, two lists of criteria were developed including qualitative and quantitative measures. A community stakeholder group provided the qualitative ranking of alternatives and NYSDOT provided the quantitative measures using models and other technical analyses. A summary of the overall project goals and objectives that were developed by these groups, focused on



both transportation and community development is shown to the right.

Table 1
Project Goals and Objectives

Goal	Objective
1 Improve Transportation System Efficiency and Reliability	1.1 Minimize transit delays within the primary study area
	1.2 Minimize delays resulting from incidents on expressways
	1.3 Enhance traffic network infrastructure
	1.4 Promote public transit service
	1.5 Improve bicycle and pedestrian travel
2 Enhance Quality of Life	2.1 Reduce the number of trucks on local streets
	2.2 Improve access to parks
	2.3 Minimize disruption to the community resulting from highway construction and operation
3 Support Economic Development	3.1 Provide direct truck access to Hunts Point peninsula markets
	3.2 Maintain and improve rail freight service to South Bronx industries and Hunts Point Markets
	3.3 Reduce truck miles and hours traveled
	3.4 Promote waterborne freight access to Hunts Point
4 Reduce Accidents	4.1 Increase pedestrian safety and reduce accidents, accident rates, and severity at busy primary study area intersections
	4.2 Reduce accidents, accident rates, and severity on the expressway system in the primary study area
5 Minimize Adverse Environmental Impacts	5.1 Reduce truck emissions in residential areas
	5.2 Minimize and mitigate adverse environmental impacts resulting from highway construction and operation
6 Support Environmental Enhancements	6.1 Provide access to planned parkland and recreational facilities
	6.2 Support the development of regional bicycle/pedestrian routes
	6.3 Support the development of river-front open space on the Bronx River and on the East River
7 Financial Viability	7.1 Minimize capital cost while meeting project objectives
	7.2 Maximize the cost effectiveness of transportation system investments
8 Maintain Security	8.1 Maintain alternative routes and delivery systems for vital freight needs in the event of a security breach on key interstate facilities

Listing of Project Goals and Objectives, NYSDOT

The NYSDOT and community stakeholders group agreed that while quantitative models can provide helpful information, there should be a qualitative review and ranking as well. NYSDOT convened a panel of stakeholders to develop qualitative rankings for many of the measures, following a process where the rankings from each panel member were averaged (see example of results in the next table). This proved to be an effective way to combine technical analysis and local perspectives into a transparent decision-making process.

Table 4
Qualitative Screening of Alternatives

Expert Panel	Objective	Max /Min	Rank-based Weight	Alternative									
				1A	1B	2A	2B	2C	2D	3A	3B	3C	
Transportation Efficiency and Security	1.1 Minimize travel delays within the primary study area.	Min	4.29	1.3	2.3	3.0	3.0	3.5	3.5	1.3	2.3	1.0	
	8.1 Maintain alternative routes and delivery systems for vital freight needs in the event of a security breach on key interstate facilities	Max	0.97	1.5	2.0	2.5	4.0	2.5	3.0	2.5	3.5	2.5	
Environmental Issues and Impacts on Quality of Life	2.2 Improve access to parks	Max	3.39	3.7	2.2	0.2	0.2	0.5	0.2	0.0	1.2	2.0	
	6.1 Provide access to planned parkland and recreational facilities												
	2.3 Minimize disruption to the community resulting from highway construction and operation	Min	3.16	3.7	3.3	0.2	0.2	0.5	0.0	0.0	0.8	1.0	
	2.1 Reduce the number of trucks on local streets	Min	7.79	3.7	3.7	0.8	0.5	1.2	0.8	1.2	2.0	0.6	
	5.1 Reduce truck emissions in residential areas												
	5.2 Minimize and mitigate adverse environmental impacts resulting from highway construction and operation	Min	2.5	3.7	3.3	0.2	1.0	1.7	0.6	0.0	1.2	2.0	
Economic Development	1.5 Improve bicycle and pedestrian transit	Mix	2.08	3.7	2.7	0.3	0.3	0.5	0.4	0.0	0.2	1.4	
	6.2 Support the development of regional bicycle/pedestrian routes												
	6.3 Support the development of river-front open space on the Bronx River and on the East River	Max	2.45	3.7	2.8	0.0	0.0	0.0	0.0	0.0	0.2	1.8	
	3.1 Provide direct truck access from expressways to Hunts Point peninsula markets	Max	5.53	0.1	0.1	1.2	0.3	4.0	3.1	0.2	2.0	0.1	
System Safety	3.2 Maintain and improve rail freight service to South Bronx industries and Hunts Point markets	Max	2.25	0.2	0.2	1.0	0.1	3.9	3.1	0.1	2.1	0.1	
	3.3 Reduce truck miles and hours traveled	Min	2.68	0.1	0.1	1.2	0.3	4.0	3.2	0.2	2.0	0.1	
NYS DOT	4.1 Increase pedestrian safety and reduce accidents, accident rates, and severity at busy primary study area intersections	Min	4.08	0.3	0.5	2.2	2.5	3.5	2.0	2.5	3.7	1.0	
	4.2 Reduce accidents, accident rates, and severity on the expressway system in the primary study area	Min	2.58	0.3	0.5	2.2	2.5	3.5	2.0	2.5	3.7	1.0	
	7.1 Minimize capital costs while meeting overall project objectives	Min	0.29	0.0	2.0	1.0	1.0	1.0	3.0	4.0	2.0	4.0	
			Total	89	84	81	45	101	74	27	88	43	

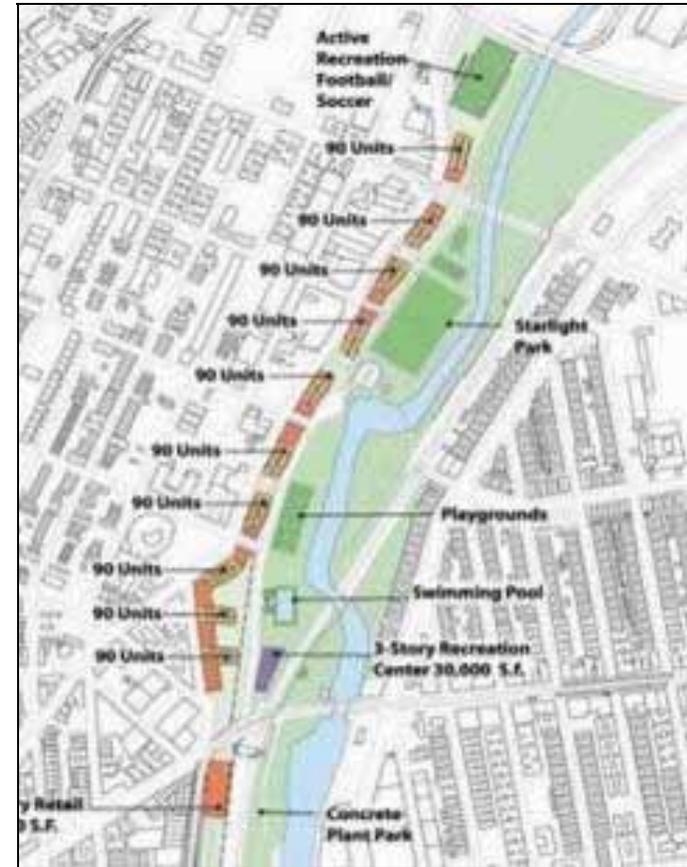
Qualitative Ranking of Alternatives based on average ranking of stakeholder group members

What can *The I-81 Challenge* learn from this effort?

The relationship between NYSDOT and the local community had seen its highs and lows during the course of this project, but currently, both sides are working collaboratively on a planning process that includes evaluation of broad community goals. Of particular interest is the process of qualitative ranking of alternatives. These techniques, where a panel of local experts is convened to provide a community perspective on various criteria, are being used more frequently for major transportation projects, and could apply to the I-81 project.

For More Information:

<https://www.nysdot.gov/regional-offices/region11/projects/project-repository/bese/index.html>



Community Vision Plan for the Sheridan Corridor