

The Cross-Bronx Expressway

by Steve Alpert

1.011 Final Project, Spring 2003

Overview

- Took longer to build than any other NYC highway planned after World War II
- Completed in 1964 (eastern Bruckner interchange completed in 1972)
- 16% cost overrun (\$10.5 million in 1950 \$); interchanges at each end cost as much as expressway between them
- Critical link in Interstate highway system as well as essential corridor for commuters, through traffic, and commercial vehicles
- 175,000+ vehicles per day on I-95 section (25% trucks)

Risks and Uncertainty

- Opposition (will the community say no?)
- Time (will it be built near schedule?)
- Usefulness (will pieces of the highway be stranded with no connections?)
- Materials (will they delay construction by being unavailable? or will their cost be a major issue?)
- Fatalities (what can go wrong on the jobsite?)

Cost-Benefit Analysis

- Benefits
 - Interstate Highway freeway link (good for trucks)
 - Fewer delays, more capacity than surface streets
 - New buildings, improvements near expressway
- Costs
 - Split neighborhoods in half, families displaced
 - Overruns due to slow progress, social/political problems
 - No room to widen expressway for current needs

Discount rate:		10.00%		Interest rate:		5.00%		Total costs (1950 \$):		40.911 million \$	
Costs (million \$)							1954 worth:		86.278 million \$		
YEAR	right of way (ROW) acquisition, planning	materials	construction	pavement	demolition/relocation	labor/testing	total cost for year	cumulative cost (adjusted for inflation)	1950 total worth		
1945	0.48	0	0	0	0	0	0.480	0.627	0.613		
1946	0.48	0	0	0	0.04	0	0.520	1.235	0.563		
1947	0.48	0	0	0	0	0	0.480	1.715	0.409		
1948	0.48	2.4	0.211	0	0	0.2	3.291	4.094	2.284		
1949	0.24	6.45	9.451	0.4	0	2.625	19.166	17.280	12.697		
1950	0	0.8	6.013	3.717	0	1.665	12.196	25.673	7.322		
1951	0.16	0	0	2.808	0.120	0.26	3.348	28.698	1.694		
1952	5	0	0	0.64	1.947	0.08	7.667	33.581	3.389		
1953	0.15	0	0.444	1.92	0.243	0.41	3.167	36.675	1.386		
1954	1.1	1	2.105	2.16	0.1	0.75	7.215	41.201	2.631		
1955	0	0	0.550	2.38	0.76	0.35	4.040	44.655	1.354		
1956	0.72	0	0	0	0	0	0.720	47.107	0.214		
1957	0.72	0	0	0	0	0	0.720	49.655	0.189		
1958	0.84	0	0	0	0	0	0.840	52.337	0.194		
1959	0	4.75	4.524	3	0	0.87	13.144	57.796	2.768		
1960	0	0.25	2.898	2.425	0	0.54	6.113	61.847	1.137		
1961	0	0.15	0.698	3.375	0	0.36	4.583	65.735	0.774		
1962	0	0	0.698	0	0	0.36	1.058	69.186	0.160		
1963	0	0.1	0.582	0.375	0	0.36	1.417	72.839	0.191		
1964	2.5	0.9	0	4.125	0	0.18	7.705	77.449	5 0.943		

NYC expressways and parkways

- 1908: Long Island Motor Parkway opens: first highway using overpasses, one of first w/ concrete
- 1925: Bronx River Parkway opens: first surviving limited-access highway, first NYC-area parkway
- 12/36: Regional Plan Association proposes NY/NJ/CT freeway network
- Late 1945: Robert Moses proposes limited-access highways for all vehicles
 - Existing parkways only open to cars
 - Largest highway undertaking by far (100+ freeway miles)
- 1955: Triborough Bridge and Tunnel Authority introduces yet another freeway plan

Who was Robert Moses? Why did he want the highway system?

- Appointed NY head of parks in 1924, Parks Commissioner of NYC and head of Triborough Bridge and Tunnel Authority in 1933
- Notable (and hated) for pushing plans through without prior approval
- Believed in environment: ensured beautiful parkways, created state parks, responsible for Shea Stadium, UN Building, 1960 World's Fair
- Hated slums, believed subways were waste of money compared to urban beautification

History of the Cross-Bronx

- Planned to connect George Washington Bridge with proposed Bronx-Whitestone Bridge
 - Only east-west connection through Bronx
- Anticipated construction issues
 - Topology of Bronx
 - Highway goes from blasted trench to viaduct instantly
 - High real estate values
 - No more land taken than needed; highway cannot be widened
 - Population density
 - Construction proceeded with minimal resident disruption
- Initial cost estimate: \$17 million (1941)
- Became part of planned I-95 in 1946; I-95 approved in 1957

Stages

- 1954
 - “East” (between Bronx River Pkwy and Bruckner Circle)
 - “West” (between Washington Bridge and Jerome Avenue)
- 1961
 - “Extension” (from Bruckner Circle to Throgs Neck Bridge) – now part of spur I-295 (also known as I-895)
- 1962
 - “Middle” (between east and west)
- 1964
 - Highbridge interchange with I-87, A. Hamilton Bridge
- 1972
 - Bruckner Interchange (I-95 complete)

Problems: Construction

- Highway to nowhere
 - First section is less than a mile long
 - Western and eastern sections done before middle
 - Possibility the middle never gets built
 - Still traffic problems through the center of the Bronx
- Accidents
 - 1959: retaining wall collapses (rain weakened hillside) – 1 died
 - 1962: crane buckles – 2 died

Problems: Construction (cont.)

- Materials
 - Unionport Bridge delayed – even with materials, would take several months to complete
 - Inferior drying method used on Highbridge pavement – had to redo
- Existing infrastructure
 - Tunnels under a subway line (!)
 - IRT subway station raised to fit highway underneath
 - How do you keep the trains going?

Problems: Social

- Many people displaced along corridor
 - First contract was for relocating tenants
 - 1530 families moved in above stretch
 - 5000 total for highway
 - \$7 million to move people
 - Neighborhood(s) destroyed permanently

Problems: Political

- Moses vs. Bronx Borough Pres. James Lyons
 - Lyons wanted alignment through Crotona Park
 - 1-2% of the damage (19 families moved)
 - Moses threatened to retire
 - Used argument that no one would approve reroute
 - Moses would stop construction if Lyons wins
 - Lyons “lost some 20 million dollars already” for not giving in on Bruckner Expressway
- Why so stubborn?
 - Corruption: friends had shares in bus depot, other property along Crotona route

Why new interchanges?

- Highbridge
 - Washington Bridge is not Interstate-standard
 - Ends in traffic light
 - Narrow lanes, no shoulders
 - Cross-Bronx and Major Deegan must connect
- Bruckner
 - Current traffic circle is inadequate for traffic
 - Also not freeway standard
 - Built along with Bruckner Expressway (new source of traffic)

Highbridge Interchange

- Initial work: create second tunnel under Port Authority (now approach to George Washington Bridge), redo interchange with Washington Bridge and Harlem River Drive
- Washington Bridge built in 1888 for \$2.649 million (\$6.74 million)
 - Work done in 1949 to improve it to six lanes and remove trolley tracks, but still ends in traffic light
 - Alexander Hamilton Bridge constructed near end (1959-64)
- Later work: connect Cross-Bronx Expressway and Major Deegan Expressway
 - Completed 18 months behind schedule
- Ultimate cost of this interchange: \$60 million
 - Technically a separate project

Bruckner Interchange

- \$67.8 million (largest single contract ever)
 - Entire Bruckner Expressway was \$137 million
- Brings four freeways together
- Delayed almost 20 years
 - Depended on completion of Bruckner Expwy.
 - Big community opposition to elevated freeway
 - Money and land acquisition were problems
 - Initial design rejected
 - Couldn't be built around existing drawbridges

Bruckner – Construction Problems

- Only one bidder out of 18
- Rising materials and labor costs

Bruckner, continued

- Missing connections – freeway network built to allow access between all directions (if you know it well enough).
- Initially served 175,000 vehicles per day – now 250,000.

Ramifications

- Robert Moses forced out of New York
 - Resigned city positions in 1959 to head World's Fair
 - Lost NY State jobs under Rockefeller
 - Retired in 1968
- No more construction through cities
 - Planned NYC expressways (Bushwick, Lower- and Mid- Manhattan, Nassau) stopped (Nassau half-built)
 - Embarcadero, Central Artery, other elevated highways now being torn down
- Community opposition now effective force
 - Park Freeway West (Milwaukee), Somerset Freeway (NJ), Boston Inner Loop and Southwest Freeway killed

The Cross-Bronx today

- 285,000 vehicles per day on entire freeway
- Routinely backed up at all hours
- Still 6 lanes (no room to widen)
- Only one good alternate route (Bruckner Expressway to I-87) – still ends up at I-95
- Many signs from when it was built still up

Verdict, Suggestions

- Verdict: Although built at great social and financial cost, the Expressway was sorely needed locally, regionally, and nationally. It is still a traffic bottleneck, but is a much better alternative than surface arteries.
- Suggestions in retrospect:
 - Use the Crotona Park routing (fewer people displaced)
 - Purchase more right-of-way (ROW) for future expansion to eight or even ten lanes