

WORK-IN-PROGRESS "Comparison of Alternatives"

PPA

Alternatives		Example	1: No Build	2A: Substructure Rehab & Replace Deck/Superstructure in Kind	2B: Substructure Rehab & Eliminate 1 Span on South Side	2C: Substructure Rehab & Eliminate 2 Spans With Partial New Abutment	3: Replace Substructure and Deck/Superstructure in Kind	4: Replace Substructure & Eliminate Span on South Side	5: Replace Substructure & Eliminate 2 Spans with Cantilever Abutment	6: Replace Substructure (in Front of Existing Abutment) & Eliminate 2 Spans with Cantilever Abutment
Purpose & Need	1	Y/N	N	Y	Y	Y	Y	Y	Y	Y
Controlling Substandard Design Elements Improved										
	2	Y/N	N	Y	Y	Y	Y	Y	Y	Y
	3	Y/N	N	N	N	N	N	N	N	N
	4	Y/N	N	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹
Multimodal & System Linkage										
	5	Y/N	N	N	N	N	N	N	N	N
	6	Y/N	N	N	N	N	N	N	N	N
	7	Y/N	N	Y	Y	Y	Y	Y	Y	Y
	8	Y/N, #	N	N	Y, 1 of 2	Y, 2 of 2	N	Y, 1 of 2	Y, 2 of 2	Y, 2 of 2
Environmental										
	9	Y/N	N	Y ¹	Y ²	Y ²	Y ²	Y ²	Y ²	Y ²
	10	Y/N	N	N	N	N	N	N	N	N
	11	# Affected	0	3 ¹	3 ¹	3 ¹	3 ¹	3 ¹	3 ¹	3 ¹
Rights-of-Way										
	12	# Impacted	0	0	0	0	1	1	1	0
	13	# Impacted	0	0	0	0	0	0	0	0
	14	# Impacted	0	0	0	0	2	2	2	2
	15	# Impacted	0	0	0	0	0	0	0	0
	16	# Impacted	0	0	0	0	0.2	0.2	0.2	0.1
	17	# Impacted	0	0	0	0	0	0	0	0
Construction Duration and Cost										
	18	Y/N	N	N	N	N	Y	Y	Y	Y
	19	duration (mo.)	NA	18	18	18	24	24	24	24
	20	Y/N, miles	NA	Y, 0.65 miles	Y, 0.65 miles	Y, 0.65 miles	Y, 0.65 miles	Y, 0.65 miles	Y, 0.65 miles	Y, 0.65 miles
	21	months	NA	6 ¹	6 ¹	6 ¹	20 ¹	20 ¹	20 ¹	20 ¹
	22	days	NA	60 ¹	60 ¹	60 ¹	90 ¹	90 ¹	90 ¹	90 ¹
	23	Construction Cost	\$0	\$18,600,000	\$18,700,000	\$19,200,000	\$22,900,000	\$23,000,000	\$23,000,000	\$21,100,000
	24	Utility Relocation Cost	\$0	\$2,000,000	\$2,000,000	\$2,000,000	\$2,500,000	\$2,500,000	\$2,500,000	\$2,200,000
	25	Maintenance & Operation Cost	\$/year	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0
	26	Life Cycle Cost (present value - 100 yrs)	\$	NA	\$22,700,000	\$22,800,000	\$23,300,000	\$26,800,000	\$26,900,000	\$26,900,000
	27	Right of Way Cost	\$	\$0	\$0	\$0	\$350,000	\$350,000	\$350,000	\$50,000
	28	Total Cost	\$	\$1,000,000	\$20,600,000	\$20,700,000	\$21,200,000	\$25,750,000	\$25,850,000	\$25,850,000

Vertical Clearance ¹Vertical Clearance is improved, but does not meet the minimum requirement of 24'-6".

Involvement with Hazardous Waste/Contaminated Sites ¹ Existing superstructure may have lead based paint and/or asbestos containing material.

² Existing superstructure may have lead based paint and/or asbestos containing material; railroad ROW typically contain regulated material.

Cultural Resources Affected ¹Central Avenue Bridge if NJSHPO confirms it is eligible for listing; Morris Canal for ground disturbance within its limits if the prism is still intact; Newark City Subway Historic District for new visual elements.

Total Time of Anticipated Bridge Closure ¹Total of all closures over the duration of construction.

Total Time of Anticipated Subway Closure ¹Total of all closures over the duration of construction.

Legend:

Grade: A measure of the road's steepness as it rises and falls along its route. Enables drainage along the travel lanes

Cross Slope: The horizontal slope of the roadway from the center to the outer edge. Enables drainage from the travel lanes

Vertical Clearance: The measure of height clearance between the rail tracks and the bottom chord of the structure