

GRADE SEPARATION OPTIONS

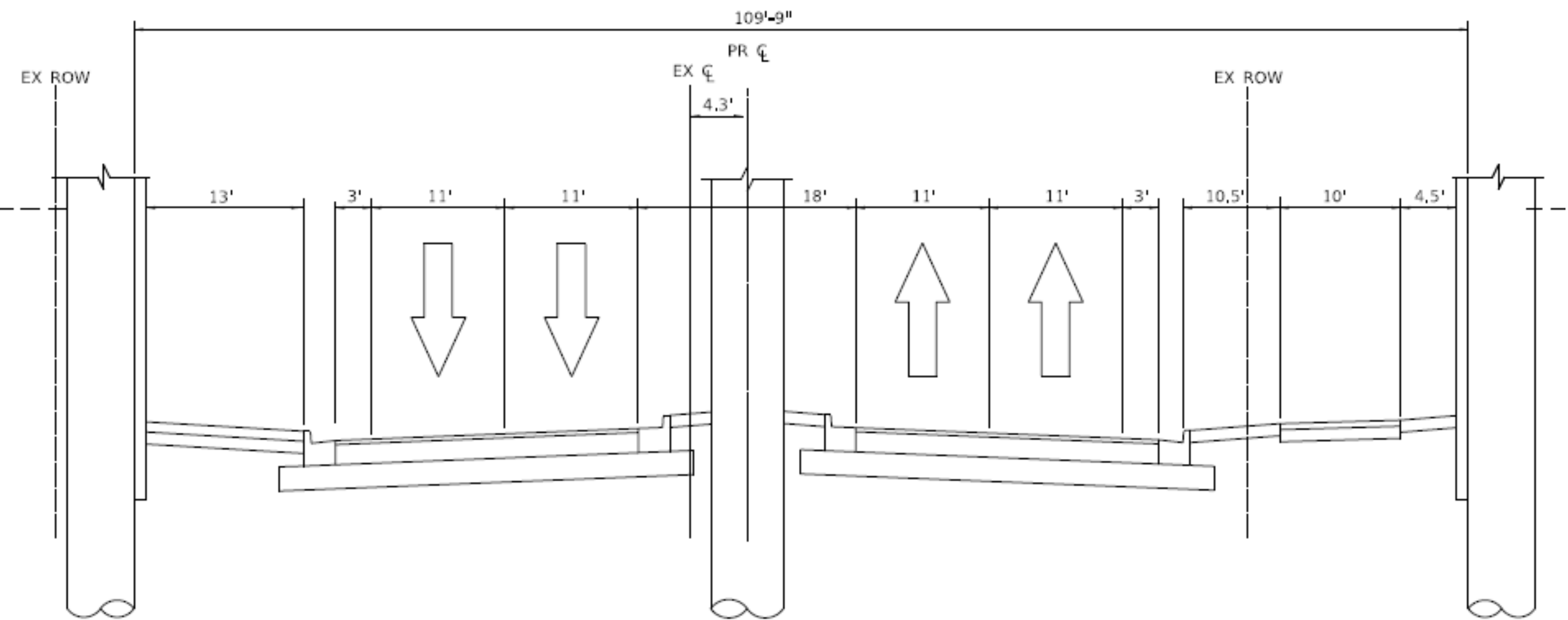
DECISION #2: WHAT TYPE OF UNDERPASS BRIDGE STRUCTURE?

1. Two-Span (unequal) Bridge (4 sub-alternatives)

2. Single-Span Bridge

3. Two-Span (equal) Bridge with Roadway Shift

UNDERPASS DESIGN CONCEPT:



DESIGN ELEMENTS:

- 2-Span Bridge
- 11' Lanes with Curb & Gutter
- 10' Multi-Use Path
- Bike Friendly Shoulder

Evaluation Criteria	Unit of Measure	UNDERPASS ALTERNATIVES					
		Underpass Bridge Alternatives					
		B1.1	B1.2	B1.3	B1.4	B2	B3
Geometric Attributes							
Number of Lanes		4	4	4	4	4	4
Lane Width	feet	11	11	11	12	12	12
Centerline Shift	feet	9	3' North	1.5' South	1.5' South	1.5	13.5
Impacts ComEd Tower		No ¹	No ¹	No ¹	No ¹	No ¹	Yes
Sidewalk (Proposed/Future)		Yes / Yes	Yes / Yes (north)	Yes / No	No / No	Yes / Yes	Yes / Yes
Multi-Use Path (MUP) Width (Proposed/Future)	feet	8/No	10/No	10/8	10/8	10	10
Bike Friendly Shoulder (Proposed/Future)		No/Yes	Yes/Yes	Yes/Yes	Yes/Yes	Yes / No	Yes/Yes
Median Width	feet	18	18	18	18	6	18
Face-to-Face Abutments	feet	102.50	102.50	102.50	102.50	102.50	126.50
Bridge Span Lengths (South/North)	feet	60.8' / 53.7'	55.4' / 59.2'	50.2' / 63.8'	50.2' / 63.8'	1 - 108.50'	2 - 67.75'
Bridge Superstructure Depth	feet	6.81	6.81	6.81	6.81	9.67	6.98
Future 6 Lane Concessions		No MUP in roadway underpass	No MUP in roadway underpass	10.5' median width, 8' MUP, no SW	10.5' median width, 11' lanes, 8' MUP, no SW	No bike friendly shoulders, 11' Lanes	None
Environmental Resource Impacts ⁵							
Wetland Impacts	acres	0.03				0.03	0.04
Stormwater Facility Impacts	acres	0				0	0
Surface Waters Impacts	acres	0				0	0
Floodway Impacts	acres	0				0	0
Floodplain Impacts	acres	0				0	0
Park Impacts (Section 4f)	acres	0.26				0.50	0.48
Historic Property Impacts	acres	0				0	0
Historic Structure Impacts	each	0				0	0
Cemetery Impacts	acres	0				0	0
Tree Impacts	each	47				82	114
Socio-Economic Impacts ⁵							
Residential Building Impacts	each	3				3	3
Commercial Building Impacts	each	0				0	0
Total Property Acquisition	acres	0.72				1.09	1.49
Parcels Affected	each	13				13	13
Access Changes	each	9				9	9
Relative Construction Cost Comparison ⁶							
Roadway		\$5,100,000				\$5,700,000	\$5,600,000
Bridge		\$5,400,000				\$4,900,000	\$5,700,000
Retaining Walls		\$9,800,000				\$12,700,000	\$9,800,000
ComEd Transmission Tower Relocation		\$0				\$0	\$8,000,000
Total Cost		\$20,300,000				\$23,300,000	\$29,100,000