Brent Spence Bridge
Replacement/Rehabilitation Project
PID No. 76789
KYTC Project Item No. 6-17

U.S. Department of Transportation
Federal Highway Administration

PARSONS BRINCKERHOFF

BRIDGE TYPE ALTERNATIVES COMPARISON MATRIX

ARCH ALTERNATIVES

Alt #	Elevation View	Section View	View from Upstream	Aerial Perspective	Comments and Notes
1	Construction Cost: $510 M	Constructability	Maintenance and Durability	Major Rehabilitation Feasibility	**Arch Inclination:** **Inclined Leg**, Vertical Leg — **Top Bracing:** **Strut**, K-Brace, Cross Braced, Lattice — **Depth of Arch:** Shallower, **Deeper** — **Hanger Arrangement:** **Vertical**, Inclined, Web — **Deck Truss Type:** Warren (1), **Warren (2)**, Lattice, Pratt, Vierendeel
2	Construction Cost: $640 M	Constructability	Maintenance and Durability	Major Rehabilitation Feasibility	**Arch Inclination:** Inclined Leg, **Vertical Leg** — **Top Bracing:** Strut, K-Brace, Cross Braced, **Lattice** — **Depth of Arch:** Shallower, **Deeper** — **Hanger Arrangement:** **Vertical**, Inclined, Web — **Deck Truss Type:** **Warren (1)**, Warren (2), Lattice, Pratt, Vierendeel

CABLE-STAYED ALTERNATIVES

Alt #	Elevation View	Section View	View from Upstream	Aerial Perspective	Comments and Notes
3	Construction Cost: $580 M	Constructability	Maintenance and Durability	Major Rehabilitation Feasibility	**Tower Shape & Number of Legs:** Inclined Leg/Arch Tower, Vertical Leg 2 Leg Option, **Vertical Leg 3 Leg Option** — **Stay Cable Arrangement:** **Harp**, Fan, Semi Fan — **Deck Truss Type:** Warren (1), Warren (2), Lattice, **Pratt**
4	Construction Cost: $620 M	Constructability	Maintenance and Durability	Major Rehabilitation Feasibility	**Tower Shape & Number of Legs:** Inclined Leg/Arch Tower, Vertical Leg 2 Leg Option, **Vertical Leg 3 Leg Option** — **Stay Cable Arrangement:** **Harp**, Fan, Semi Fan — **Deck Truss Type:** Warren (1), Warren (2), Lattice, **Pratt**
5	Construction Cost: $650 M	Constructability	Maintenance and Durability	Major Rehabilitation Feasibility	**Tower Shape & Number of Legs:** Inclined Leg/Arch Tower, **Vertical Leg 2 Leg Option**, Vertical Leg 3 Leg Option — **Stay Cable Arrangement:** Harp, Fan, **Semi Fan** — **Deck Truss Type:** Warren (1), **Warren (2)**, Lattice, Pratt
6	Construction Cost: $630 M	Constructability	Maintenance and Durability	Major Rehabilitation Feasibility	**Tower Shape & Number of Legs:** Inclined Leg/Arch Tower, **Vertical Leg 2 Leg Option**, Vertical Leg 3 Leg Option — **Stay Cable Arrangement:** Harp, Fan, **Semi Fan** — **Deck Truss Type:** Warren (1), **Warren (2)**, Lattice, Pratt