Zeitschrift: IABSE reports = Rapports AIPC = IVBH Berichte
Band: 55 (1987)

Artikel: Segmental bridges in the U.S.A.
Autor: Muller, Jean
DOI: https://doi.org/10.5169/seals-42828

Segmental Bridges in the U.S.A

Ponts à voussoirs aux États-Unis

Fertitgeil Brücken im U.S.A

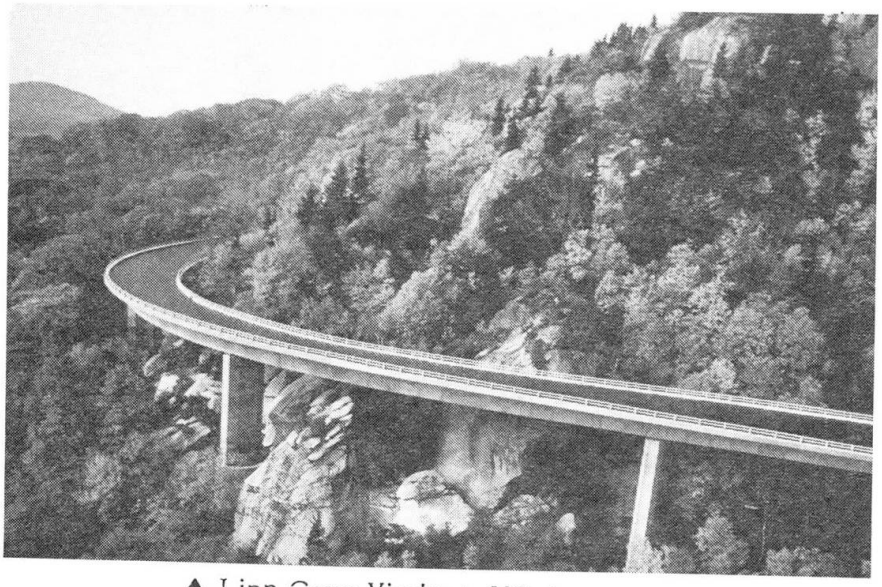
Jean MULLER
Chairman of the Board
Figg and Muller Engineers Inc.
Paris, France

		Name and Location	Bridge Type Construction Method (x)	Max. Span (m)	Deck Area (1000 m2)	Cost (M$)
HIGHWAY BRIDGES (x)	CIP	Lake Washington, WA	CBG	81	25.0	26
		Red River, LA	CBG	113	7.1	9
		Gastineau Bridge, AK	CBG	192	5.3	15
		Houston Channel, TX	CBG	229	8.4	20
	P/C	San Antonio Y, TX	S/SBG	33	120.3	65
		Long Key, FL	S/SBG	36	43.3	15
		Niles Channel, FL	S/SBG	36	17.6	6
		Wiscasset, ME	S/SBG	37	11.3	8
		Seven Mile, FL	S/SBG	41	128.0	45
		Channel Five, FL	S/SBG	41	16.3	7
		I110-Biloxi, MS	S/SBG	42	57.1	40
		Glenwood Canyon, CO	S/SBG	45	7.0	6
		Linn Cove, NC	PBG	55	4.4	8
		Albemarle Sound, NC	S/SBG,CBG	68	58.2	23
		Escatawpa River, MS	S/SBG,CBG	91	22.6	12
		Wando River, SC	S/SBG,CBG	120	68.9	32
		Dauphin Island, AL	S/SBG,CBG	120	15.3	13
		James River, VA	S/SBG,CSC	192	50.2	35
		Neches River, TX	CSC	195	49.1	23
		Sunshine Skyway, FL	CSC	365	68.5	115
RW (x)		MARTA (Atlanta), GA	S/SBG	42	20.0	10
		Escambia Bay, FL	S/SBG	52	22.7	16
				TOTAL	m2 826.600	$ 549 M

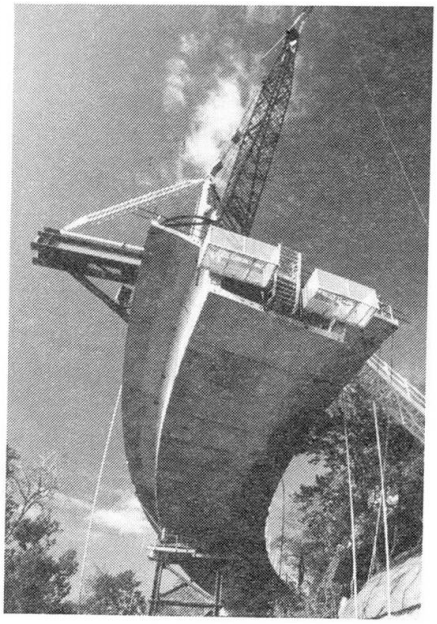
(x) Symbols

CIP	Cast in Place
P/C	Precast
RW	Railway Bridge
CBG	Cantilever Box Girder
CSC	Cable Stay Cantilever
S/SBG	Span By Span Box
PBG	Progressive Box

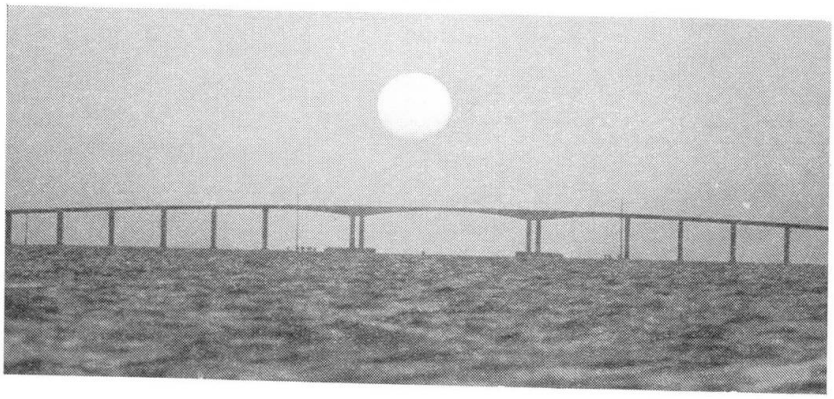
- Short span precast segmental box girder decks are adapted to repetitive structures such as trestles or elevated highway or railway urban bridges.
- Precast segmental cantilever box girder bridges have been used in spans of up to 120 m.
- Cast-in-place cantilever box girders built on travelers are used on longer single spans of up to 230 m.
- Cable-stayed concrete box girder bridges combine economy in spans of 180 m to 400 m with the intrinsic advantages of rigidity and stability of concrete constructions.
- Concrete segmental bridges have proven their economy over conventional concrete or steel designs in a great variety of structure types and over a large span range.



▲ Linn Cove Viaduct, NC ▶

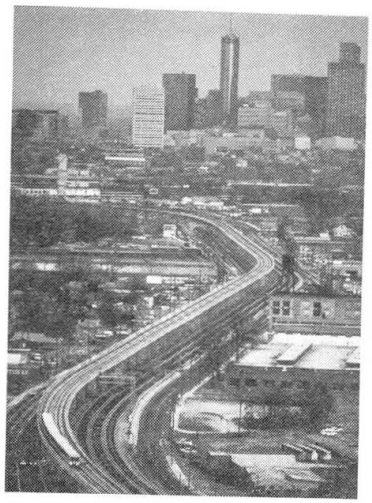


▼ Dauphin Island, AL



Seven Mile
▼ Bridge, FL

MARTA Urban
Viaduct, GA ▼



Model of
▼ Cable Stayed
Bridge