

APPENDIX A
OVERSIZED TABLES
Pages 297.1 through 322

Table A-1 Parts needed (and their quantities) for Bailey bridges

TRUSS CONSTRUCTION CLASS	WHEELED LOAD TRACKED LOAD	SPAN (ft)	SS		DS				TS				DD				TD				DT				TT								
			30	40	75	65	60	50	40	85	65	50	35	80	65	45	35	90	75	55	45	35	70	70	60	55	45	35	80	70	55	45	35
Bearer, footwalk	23		16	20	24	28	32	36	40	32	40	46	50	46	50	54	58	50	54	58	62	66	58	62	66	70	74	78	70	74	78	82	86
Bearing	68		4	4	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Bolt, bracing	B N	1 25%	20 10	25 15	80 15	95 20	110 20	125 25	140 30	170 25	190 30	210 30	230 35	265 30	290 35	315 40	340 40	400 30	435 35	470 40	505 45	540 50	480 70	515 85	550 100	585 100	620 100	655 100	820 175	870 190	920 230	970 245	1,020 295
Bolt, chord	B N	7.5 10%												88	97	106	114	145	158	172	185	198	286	308	330	352	374	396	493	524	554	585	616
Bolt, ribband, guardrail, J		4.5	62	70	79	88	97	106	114	106	114	123	132	123	132	141	150	132	141	150	158	167	150	158	167	176	185	194	176	185	194	202	211
Brace, sway, M2	B N	68 10% to 4 max	7 2	9 4	11 4	13 7	15 9	18 11	20 11	18 9	20 11	22 11	24 13	22 11	24 13	26 15	29 18	24 13	26 15	29 18	31 15	33 18	54 15	58 18	62 20	66 20	70 20	74 20	66 31	70 33	74 37	78 40	82 44
Chess, M2		65	100	114	129	143	157	172	186	172	186	200	215	200	215	228	241	215	228	241	254	267	241	254	267	280	293	306	280	293	306	319	332
Clamp, transom	B N	7 10% to 20 max	15 4	20 7	99 7	57 9	65 9	73 11	81 13	212 11	125 13	134 13	147 15	180 13	99 15	108 15	117 18	296 13	308 15	174 22	187 24	200 29	236 24	125 24	134 29	143 33	152 33	161 33	416 55	226 59	238 66	250 70	262 79
Clip, retainer	B N	0.13 25% to 70 max	20 6	25 10	60 10	70 15	80 15	90 20	100 25	135 20	150 25	165 30	180 35	210 25	230 30	250 30	270 35	345 25	370 30	394 35	418 40	442 50	382 40	406 40	430 50	454 60	478 60	502 60	646 100	682 110	718 125	754 135	790 175
Footwalk		104	8	10	12	14	16	18	20	18	20	22	24	22	24	26	28	24	26	28	30	32	28	30	32	34	36	38	34	36	38	40	42
Frame, bracing	B N	44 10%			11	13	15	18	20	18	20	22	24	46	51	55	59	51	55	59	67	68	90	90	103	110	117	123	110	117	123	130	136
Panel	B N	577 10% to 10 max	7 4	9 7	22 7	26 9	31 9	35 11	40 13	53 11	59 13	66 13	73 15	88 13	97 15	106 15	114 18	142 13	154 15	166 22	178 24	190 29	166 24	178 24	190 33	202 33	214 33	226 33	298 55	316 59	334 75	352 79	370 97
Pedestal, ramp, M2		93	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Pin, panel	B N	6.1 20% to 50 max	19 5	24 10	58 10	67 14	77 14	86 19	96 24	110 19	125 24	139 24	154 29	202 24	221 29	240 29	259 34	302 24	326 29	350 34	374 38	398 48	362 38	386 38	410 48	434 58	458 58	482 58	602 96	638 106	673 120	710 130	746 168
Pin, panel, short		5.8	4	4	4	4	4	4	4	16	16	16	16	4	4	4	4	24	24	24	24	24	4	4	4	4	4	4	24	24	24	24	24
Plate, base		381	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Plate, tie		3.5	4	4	6	6	6	6	6	8	8	8	8	6	6	6	6	8	8	8	8	8	6	6	6	6	6	6	8	8	8	8	8
Post, end, female		130	4	4	6	6	6	6	6	8	8	8	8	6	6	6	6	8	8	8	8	8	6	6	6	6	6	6	8	8	8	8	8
Post, end, male		121	4	4	6	6	6	6	6	8	8	8	8	6	6	6	6	8	8	8	8	8	6	6	6	6	6	6	8	8	8	8	8
Post, footwalk		10	15	20	24	29	33	37	42	37	42	46	50	46	50	54	58	50	54	58	62	66	58	62	66	70	74	78	70	74	78	82	86
Raker	B N	22 10%	9 4	11 7	13 7	15 9	18 11	20 13	22 13	20 11	22 13	24 15	26 15	24 13	26 15	29 18	31 18	26 13	29 15	31 18	33 18	35 20	31 18	33 20	35 22	37 22	40 22	42 22	37 33	40 35	42 40	44 42	46 46
Ramp, button		348	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Ramp, plain		338	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Ribband, guardrail, steel		162	14	16	18	20	22	24	26	24	26	28	30	28	30	32	34	30	32	34	36	38	34	36	38	40	42	44	40	42	44	46	48
Rope, handrail, 1/2" x 150'		20	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Stringer, button		267	7	9	11	13	15	18	20	18	20	22	24	22	24	26	29	24	26	29	31	33	29	31	33	35	37	40	35	37	40	42	4
Stringer, plain		260	13	18	22	26	31	35	40	35	40	44	48	44	48	52	56	48	52	56	60	64	56	60	64	68	72	76	68	72	76	80	84
Support, overhead-bracing		150	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Transoms, M2	B N	618 10% to 4 max	9 2	11 3	23 3	15 4	18 4	20 6	22 7	37 6	22 7	24 7	26 8	45 7	26 8	29 9	31 10	50 7	54 8	31 9	33 9	35 10	70 9	48 9	51 10	54 11	57 11	60 11	86 17	57 18	60 20	63 21	66 23

CRITICAL DIMENSIONS	
Road width between steel ribbands	12'6"
Road width between timber truss guards	13'9"
Lateral distance between centerlines of trusses:	
inner trusses	14'10"
middle trusses	17'10"
outer trusses	19'3"
Lateral distance between centerlines of base plates:	
S-truss bridge	14'10"
D-truss bridge	16'4"
T-truss bridge	17'3 1/2"
Lateral distance between outside edges of base plates:	
S-truss bridge	19'5"
D-truss bridge	20'11"
T-truss bridge	21'10 1/2"
Lateral distance between measuring lugs of rocking-roller templates	11'6 1/2"
Lateral distance between measuring lugs of plain-roller templates:	
SS, DS bridges	11'6 1/2"
TS, DD, TD, DT, TT bridges	10'10 1/2"
Longitudinal spacing between plain rollers	25'
Height from base of base plate to top of chess	28 5/16"
Height from base of rocking-roller template to top of rocking-roller	16 5/16"
Height from base of plain-roller template to top of plain roller	8 15/16"
Height from base of ramp pedestal to top of ramp chess	17 1/4"
Height from bottom of half round lug under sloping end of ramp to top of ramp chess	5 1/4"
Height from top of chess to overhead bracing:	
normal	14'7"
expedient	12'3"
Height from base of bearing to bottom of panel	5 17/32"
Height from bottom of panel to top of chess	20 11/16"
Height from bottom of half round lug of end post to top of chess	22 13/32"
Height from base of rocking-roller bearing to top of rocking roller	13 5/16"

Notes:
B = bridge
N = nose

TYPES OF CONSTRUCTION	SPAN (ft)	LAUNCHING CONSTRUCTION																														
		30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210												
SS	Bays in nose	SS	2	3	3	4	5	5	6	6	1																					
	Distance of links from tip of nose (ft)	DS	10 20 20 30 30																													
	Required distance behind rocking rollers (ft)	DD	35	43	47	55	63	67	75	76																						
DS	Bays in nose	SS	3	4	4	5	6	6	7	8	8	8	1																			
	Distance of links from tip of nose (ft)	DS	10 10 20 20 20 30 40 10 ² 10 ²																													
	Required distance behind rocking rollers (ft)	DD	45	52	57	64	71	76	83	90	95	96																				
TS	Bays in nose	SS	5	6	6	7	7	8	9	9	9	1																				
	Distance of links from tip of nose (ft)	DS	20 20 20 30 30 40 10 ² 20 ² 20 ²																													
	Required distance behind rocking rollers (ft)	DD	63	70	74	81	86	93	100	101	106																					
DD	Bays in nose	SS	6	7	7	8	7	6	6	1	7	1																				
	Distance of links from tip of nose (ft)	DS	20 20 30 30 40 40 10 ² 10 ² 20 ²																													
	Required distance behind rocking rollers (ft)	DD	74	81	86	93	100	106	106	113	117																					
TD	Bays in nose	SS	6	7	6	5	5	5	5	1	6	1	7	1																		
	Distance of links from tip of nose (ft)	DS	20 20 30 30 40 40 10 ² 10 ² 20 ²																													
	Required distance behind rocking rollers (ft)	DD	77	84	90	96	103	106	112	125	126																					
DT	Bays in nose	SS	3	3	4	5	5	5	1	6	1	7	1																			
	Distance of links from tip of nose (ft)	DS	30 30 30 40 40 40 10 ² 20 ² 30 ²																													
	Required distance behind rocking rollers (ft)	DD	91	96	102	109	112	116	131	132	135																					
TT	Bays in nose	SS	5	5	5	5	5	5	1	6	1	7	1																			
	Distance of links from tip of nose (ft)	DS	40 40 40 10 ² 20 ² 30 ²																													
	Required distance behind rocking rollers (ft)	DD	94	96	102	112	115	117																								

SPANS LAUNCHED INCOMPLETE				
TYPE OF CONSTRUCTION	SPAN (ft)			

Table A-2 Components of a panel bridge, Bailey type M2

NOMENCLATURE	AVERAGE UNIT WEIGHT (lb)	QUANTITY	TOTAL WEIGHT (lb)
Bearer, footwalk	23	80	1,840
Bolt, bracing, bridge	1	1,200	1,200
Bolt, connector, chord	7.5	400	3,000
Bolt, end-post, spares	0.75	24	18
Bolt, ribband, guardrail J	4.5	400	1,800
Brace, sway	68	64	4,352
Chess, M2	65	336	21,840
Clamp, transom	7	600	4,200
Footwalk, aluminum assy		40	
Footwalk, wood	104	32	3,328
Frame, bracing, bridge	44	64	2,816
Nut, plain, hexagon		24	
Panel, truss, bridge	577	130	75,010
Pedestal, ramp	93	16	1,488
Picket, steel	12	40	480
Pin, connector, panel, 8 5/16"	6.1	400	2,400
Pin, connector, panel, 7 9/16"	5.8	38	220
Pin, sway-brace	1.1	50	55
Plate, base, bearing	381	8	3,048
Plate, tie	3.5	42	147
Post, end, female	130	16	2,080
Post, end, male	121	16	1,936
Post, footwalk	10	80	800
Raker, side, strut	22	64	1,048
Ramp, button	348	16	5,568
Ramp, plain	338	32	10,816
Retainer, bridge pin	0.13	1,000	130
Ribband, guardrail	162	48	7,776
Rope, manila, 2" x 600'	7.5 ft/lb	1	80
Screw, cap, hexagon, 4 1/2"		24	
Shoe, bearing, 4 5/16"	68	16	1,088
Stringer, button	267	36	9,612
Stringer, plain	260	72	18,720
Tape, luminous, 1" x 50 yd		2	
Transom, trestle	618	56	34,608
Total			233,400

Table A-3 Erection equipment for a panel bridge, Bailey type M2

NOMENCLATURE	AVERAGE UNIT WEIGHT (lb)	QUANTITY	TOTAL WEIGHT (lb)
Bag, Bailey bridge parts and tools	2	50	100
Bar, carrying	8	40	320
Block, double, for 3/4" rope	8	8	64
Block, triple, for 1" rope	20	4	80
Block, snatch, for 3/4" rope	6.3	4	25
Extractor, pin	18	4	72
Hammer, rubber-faced	4	45	180
Holdfast, complete w/9 pickets	160	12	1,920
Jack, ratchet-lever, 15-ton	128	10	1,280
Jack, chord	82	12	984
Lever, panel	48	12	672
Link, launching-nose, Mk II	28	24	692
Lumber, softwood, dimension 3" x 6" x 4'6"	18	48	864
Lumber, softwood, dimension 6" x 6" x 4'6"	52	144	7,488
Nail, wire, steel		300	300
Roller, plain	116	12	1,392
Roller, rocking	206	12	2,472
Roller, transom, Bailey bridge	12	4	48
Rope, sisal, lashing, 3/8" x 25'	3.3	88	290
Rope, sisal, 3/4" x 600"	102	2	204
Rope, sisal, 1" x 600"	156	2	312
Shackle, anchor-type	5	4	20
Shoe, jack, 4 3/16" high	36	8	288
Sledge, blacksmith, 8-lb	8	12	96
Spike, 3/8" x 8"		20	20
Template, rocking-roller	78	8	624
Template, plain-roller	22	12	264
Tongs, carrying, bridge-erection	13	20	260
Wedge, wood	12	16	192
Wire-rope assembly, single-leg	12	4	48
Wrench, ratchet, reversible, with 1 1/8" and 1 1/8" sockets, for 3/4" and 1 1/4" bolts	13	30	390
Wrench, socket, offset 90 degrees, 1 1/8", for 3/4" bolts	12	40	480
Wrench, structural, 1 1/8", for 3/4" bolts	2	60	120

Table A-3 Erection equipment for a panel bridge, Bailey type M2—continued

NOMENCLATURE	AVERAGE UNIT WEIGHT (lb)	QUANTITY	TOTAL WEIGHT (lb)
Wrench, structural, 1 1/2", for 1" bolts	4.7	30	141
Wrench, structural, 1 1/8", for 1 1/4" bolts	5.6	40	224
Total			22,926

Table A-4 Bridge conversion set No. 3, Bailey type, panel crib pier, fixed M2*

NOMENCLATURE	AVERAGE UNIT WEIGHT (lb)	QUANTITY	TOTAL WEIGHT (lb)
Bag, transport	2	30	60
Bearing, crib	37	24	888
Bearing, junction-link	217	6	1,302
Bolt, bracing	1	36	36
Bolt, chord	7.5	8	60
Brace, sway, M2	68	12	816
Capsill, crib	251	12	3,012
Chess, junction, M2	149	4	596
Clamp, chord	11	32	352
Clamp, transom	7	32	224
Clip, retainer, steel	0.13	200	26
Frame, bracing	44	4	176
Link, junction	36	6	216
Link, launching-nose, Mk II	28	6	168
Pin, panel	6.1	120	732
Pin, sway-brace (spare)	1.1	2	2
Plate, tie	3.5	16	56
Post, junction, span, female	202	6	1,212
Post, junction, span, male	194	6	1,164
Raker	22	16	352
Total			11,450

Note:
One bridge conversion set No. 3 makes two crib-pier loads

Table A-5 Number of standard truck loads for different spans and assemblies

SPAN (ft)	TYPE OF CONSTRUCTION																																							
	SS										DS										TS										DD									
	30	40	50	60	70	80	90	100	110	120	50	60	70	80	90	100	110	120	130	140	80	90	100	110	120	130	140	150	160	100	110	120	130	140	150	160	170	180		
Parts and grillage load, #1	1	1	1	1	1	1	1	1	1	(*)	(*)	1	1	1	1	1	1	1	1	1	(*)	(*)	1	1	1	1	1	1	2	1	1	(*)	(*)	(*)	2	2	(*)	2	(*)	2
Launching-nose load, #2	1	1	1	1	1	1	2	2	2	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3
Panel load, #3	1	1	2	2	2	2	2	3	3	3	3	4	4	4	5	5	6	6	7	7	6	6	7	8	9	9	10	10	11	9	10	11	12	13	14	15	18	19		
Transom load #4	2	2	2	3	3	4	4	3	4	4	3	4	4	4	3	5	5	5	6	6	6	4	4	5	5	5	6	6	6	7	8	5	5	6	6	6	7	7		
Deck load, #5	1	1	2	2	2	2	3	3	2	2	2	2	2	3	3	3	3	4	4	4	2	3	3	3	3	4	4	4	4	3	3	3	4	4	4	4	5	5		
Ramp load, #6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5		
Footwalk load, #7	1	1	1	1	1	1	2	2	1	1	1	1	1	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3		
Spares load, #8	1	1	1	1	1	2	2	2	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3	3	3		
Overhead-bracing load, #9																																								
Total 5-ton dump	9	9	12	11	11	12	14	15	14	13	13	14	16	17	17	18	19	20	18	19	19	20	21	22	24	23	25	23	24	25	26	28	30	31	36	36				
Vehicles 4-ton bolster trailer	3	3	3	4	4	5	6	5	5	4	5	5	6	5	7	7	7	8	7	6	6	7	7	7	8	8	8	9	10	7	7	8	8	8	10	10				

Table A-5 Number of standard truck loads for different spans and assemblies—continued

SPAN (FT)	TYPE OF CONSTRUCTION																													
	TD										DT										TT									
	110	120	130	140	150	160	170	180	190	200	130	140	150	160	170	180	190	200	210	160	170	180	190	200	210					
Parts and grillage load* #1	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)	(*)					
Launching-nose load #2	2	2	3	3	3	3	4	4	4	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4					
Panel load #3	15	16	18	18	20	22	26	28	28	18	18	20	22	26	28	28	31	32	32	32	38	40	42	44	46					
Transom load #4	8	8	5	6	6	6	7	7	8	9	9	6	6	7	7	8	8	8	11	12	7	8	8	8	8					
Deck load #5	3	3	4	4	4	4	5	5	5	4	4	4	4	5	5	5	5	6	4	5	5	5	5	5	6					
Ramp load #6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4					
Footwalk load #7	2	2	2	2	2	2	3	3	3	2	2	2	2	3	3	3	3	3	2	3	3	3	3	3	3					
Spares load #8	2	2	2	2	2	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3					
Overhead-bracing load #9																														
Total 5-ton dump	29	30	34	34	36	39	45	47	47	33	33	38	39	44	46	49	52	54	49	56	58	60	62	62	68					
Vehicles 4-ton bolster trailer	10	10	7	8	8	8	10	10	11	11	11	8	8	10	10	11	11	11	13	15	10	11	11	11	11					

*Grillage requirements based on soil with a safe bearing pressure of 2 tons per square foot.

** These bridges require grillages which do not use materials supplied in the parts and grillage loads.

Table A-6 Panel crib piers that can be assembled using standard truck loads

POSITION OF ROCKER BEARING	PIER		STANDARD TRUCK LOADS			
	HEIGHT	TYPE OF CONSTRUCTION	PARTS LOAD #1	PANEL LOAD #3	TRANSOM LOAD #4	CRIB-PIER LOAD #10
BASE OF PIER	6'3½"	SS (1H)	1	1	1	1
		DS (1H)	1	1	1	2
		TS (1H)	1	1	1	2
	7'2½"	SS (1H)	1	1	1	1
		DS (1H)	1	1	1	2
		TS (1H)	1	1	1	2
	10'10½"	SS (2V)	1	1	1	1
		DS (2V)	1	1	1	1
		TS (2V)	1	2	1	1
	11'2½"	SS (1V)	1	1	1	1
		DS (1V)	1	1	1	1
		TS (1V)	1	1	1	1
11'7¼"	SS (1V)	1	1	1	1	
	DS (1V)	1	1	1	2	
	TS (1V)	1	1	1	2	
TOP OF PIER	6'6½"	SS (1H)	1	1	1	2
		DS (1H)	1	1	1	2
		TS (1H)	1	1	1	2
	11'3"	SS (1V)	1	1	1	2
		DS (1V)	1	1	1	2
		TS (1V)	1	2	1	2
	11'7"	SS (2V)	1	1	1	2
		DS (2V)	1	1	1	2
		TS (2V)	1	2	1	2
	16'6½"	SD (1H-1V)	1	1	1	2
		DD (1H-1V)	1	1	2	2
		TD (1H-1V)	1	2	1	2
	17'0"	SD (2V-1H)	1	1	1	2
		DD (2V-1H)	1	2	1	2
		TD (2V-1H)	1	3	1	2
	21'3"	TD (1V-1V)	1	2	1	2
		DD (2V-1V)	1	2	1	2
		DD (2V-1V)	1	2	1	2
	21'7"	TD (2V-1V)	1	3	1	2
		DD (2V-2V)	1	2	1	2
		TT (2V-2V-2V)	1	5	2	2
	31'7"	DT (2V-2V-2V)	1	3	2	2
		TT (2V-2V-2V)	1	5	2	2
		DQ (4V-4V-2V-2V)	1	6	3	4
41'7"	TQ (4V-4V-2V-2V)	1	9	3	6	
	D5 (4V-4V-2V-2V)	1	7	4	5	
	T5 (4V-4V-2V-2V)	1	10	4	6	

Table A-7 Classes of Bailey bridge M2 (by type of construction and type of crossing)

TYPE OF CONSTRUCTION	RATING	SPAN (ft)																			
		30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	
SS	N	30	24																		
	C	30	24	24																	
	R	42	36	33	30	24	20	16	12												
	N	37	34	31	29																
DS	C	47	40	36	33	30	24	19	14												
	R	42	38	35	32	30															
	N			75	75	60	50	40	30	20	16	12	8								
	C			70	65	60	55	45	30												
TS	C			83	77	68	60	50	37	30	23	18	14								
	R			76	73	69	60	50	39	32											
	N			88	85	78	66	55	42	34	27	21	17								
	C			84	79	75	64	55	44	36	30										
DD	C																				
	R																				
	N																				
	C																				
TD	C																				
	R																				
	N																				
	C																				
DT	C																				
	R																				
	N																				
	C																				
TT	C																				
	R																				
	N																				
	C																				

Note:
N=Normal
C=Caution
R=Risk
1 Upper figure represents wheeled-load class
2 Lower figure represents tracked-load class

Table A-8 Formulas for computing number of parts and spares for two-lane bridges and noses

PART	BRIDGE		NOSE		
	CONSTRUCTION	FORMULA ¹	SPARES ²	FORMULA ³	SPARES ²
Bearing, footwalk	All types	4N+2	2 or 4		
Bearing	SS-DS	8			
	DS-DD	12			
	TS-TD	12			
	TS-QD	14			
	DD-QD	14			
	DT-QT	14			
Bolt, bracing	SS-DS	12N+8	25%	6n+2	25%
	DS-DD	24N+12		8n	
	TS-TD	30N+14		8n	
	TS-QD	36N+20		8n+36(140')	
	DD-QD	40N+24		8n+52(150'-160')	
Bolt, chord	DT-QT	56N+40			
	DS-DD	4N	10%		
	TS-TD	6N			
	TS-QD	8N			
	DD-QD	16N			
	DT-QT	40N			
Bolt, end-post (spares)	All types		4		
Bolt, ribband, guardrail or curb	All types		10%		
		Bridge	16N		
Ramp		64			
Brace, sway wo overhead bracing	All types	4N	10% to 4 max	SS-DS and DS- DD 2n; rest 4n	1 or 2
		w overhead bracing	DT-QT	8N-4	
Chess Bridge Ramp	All types	26N	10% to 20 max		
		104			
Clamp, transom	SS-DS	10N	10% to 20 max	4n+2	10%
	DS-DD	14N		6n+3	
	TS-TD	21N		4n+2	
	TS-QD	22N		4n+2	
	DD-QD	18N		4n+19 (140')	
	DT-QT	18N		4n+25 (150'-160')	
Clip, retainer	TS-TD	24N+18	25% to 70 max	8n-8	25%
	TS-QD	28N+20		8n-8	
	DD-QD	32N+16		8n (140')	
	DT-QT	48N		8n+8 (150'-160')	
Footwalk	All types	2N	2		
Frame, bracing	SS-DS	N	10%		1 or 2
	DS-DD	4N+1			
	TS-TD	4N+1			
	TS-QD	6N+2			
	DD-QD	8N+4		9 (140')	
	DT-QT	12N+8		13 (150'-160')	

Table A-8 Formulas for computing number of parts and spares for two-lane bridges and noses—continued

PART	BRIDGE		NOSE		
	CONSTRUCTION	FORMULA ¹	SPARES ²	FORMULA ³	SPARES ²
Panel	SS-DS	4N	10% to 10 max	3n	10%
	DS-DD	8N		4n	
	TS-TD	12N		4n	
	TS-QD	14N		4n+8 (140')	
	DD-QD	16N		4n+12 (150'-160')	
	DT-QT	24N			
Pedestal, ramp	All types	16			
Pin, panel	SS-DS	8N+8	20% to 50 max	6n-6	20%
	DS-DD	16N+12			
Pin, sway-brace (spares)	All types		12		20% to 30%
Plate, base	SS-DS	6			
	DS-DD	6			
	TS-TD	6			
	TS-QD	8			
	DD-QD	8			
	DT-QT	8			
Plate, tie	TS-TD	4N+2	10%		
	TS-QD	2N+2			
Post, end, female	SS-DS	4	2		
Post, end, male	DS-DD	6	2		
	TS-TD	9			
	TS-QD	10			
	DD-QD	8			
	DT-QT	8		10% to 4 max	
	All types	4N+2	10%		
Post, footwalk	All types	4N+2	10%		
Raker	SS-DS	4N+4		3n+1	2
	DS-DD	4N+4		4n	
	TS-TD	3N+3			
	TS-QD	4N+4			
	DD-QD	4N+4			
	DT-QT	4N+4			
Ramp, button	All types	16			
Ramp, plain	All types	32			
Ribband, guardrail or curb	All types	Bridge	4N		
		Ramp	16		
Stringer, button	All types	4N	10%		
Stringer, plain	All types	8N	10% to 4 max		
Support, bracing, overhead	DT-QT	4N	10% to 4 max		
Transom	All types	4N+2	10% to 4 max	SS-DS	1
				DS-DD	
				TS-TD 2n+1	
				TS-QD	
w overhead bracing	DT-QT	6N+2		DD-QD 2n+1	
Ramp	All types	4		2n+2(140'-160')	

¹N = number of bays in bridge
²Spares are not included in formulas and must be added
³n = number of bays in nose (see Table 10-3)

Table A-9 Number of parts per bay for class 30 bridges

ITEM	UNIT WEIGHT		ITEM																								NUMBER OF UNITS	TOTAL WEIGHT (lb)	TOTAL WEIGHT (short tons)									
	(lb)		PLATE, BASE	BEARER, FOOTWALK	BEARING	BOLT, BRACING M-3 (WITH NUT)	BOLT, CHORD (WITH NUT)	BOLT, RIBBAND GUARDRAIL, T, M-3	BRACE, SWAY, M-3 (COMPLETE WITH PINS)	BRACE, SWAY, OVERHEAD EXTENSION, M-3 (WITH PIN)	CHESS, M-3	CLAMP, TRANSMOM, M-3	FOOTWALK	FRAME, BRACING, M-3	PANEL	PEDESTAL, RAMP, M-3	PIN, PANEL (COMPLETE WITH RETAINER CLIP)	PIN, PANEL HEADLESS, M-3 (OO)	POST, END, FEMALE	POST, END FEMALE, M-3	POST, END, MALE	POST, END, MALE, M-3	POST, FOOTWALK	RAKER, M-3	RAMP, PLAIN	RAMP, BUTTON				RIBBAND, GUARD-RAIL (STEEL)	RIBBAND, GUARDRAIL LONG (STEEL), M-3	STRINGER, BUTTON	STRINGER, BUTTON, LONG, M-3	STRINGER, PLAIN	STRINGER, PLAIN, LONG, M-3	SUPPORT BRACING, OVERHEAD	PLATE, TIE	TRANSMOM, M-3
END BAY AT TAIL OF BRIDGE	SS	2	381	22	68	1.0	7.5	.75	72.5	20	130	7	104	42	577	97	6.0	5.8	130	119	121	110	10	25	338	349	162	175	267	293	260	282	150	3.5	648	70	8,073	4.04
	DS	2	4	4	4	12		8	2		13	4	2	2	4		16		4	4			4	2			2	2	2	5				2	2	98	9,791	4.90
	TS	2	4	4	16			8	2		13	12	2	2	6		20	4	6	4			4	2			2	2	2	5				2	2	118	11,241	5.62
	DD	2	4	4	20	8		8	2		13	8	2	2	4	8		4	4	4			4	2			2	2	2	5				2	2	132	12,323	6.16
	TD	2	4	4	28	12		8	2		13	12	2	4	12		36	6	6	4			4	2			2	2	2	5				2	2	168	14,997	7.50
	DT	2	4	4	20	8		8	2		13	8	2	4	8		28	4	4	4			4	2			2	2	2	5				2	2	132	12,323	6.16
	TT	2	4	4	28	12		8	2		13	12	2	4	12		36	6	6	4			4	2			2	2	2	5				2	2	168	14,997	7.50
INTERMEDIATE BAY	SS							8	2		13	4	2	2	2		4						4	2			2		2	5				2	2	60	6,891	3.45
	DS							8	2		13	8	2	2	4		8						4	2			2		2	5				2	2	80	8,189	4.09
	TS							8	2		13	12	2	4	6		12						4	2			2		2	5				2	2	102	9,441	4.72
	DD					8		8	2		13	8	2	4	8		16						4	2			2		2	5				2	2	110	10,097	5.35
	TD					12		8	2		13	12	2	6	12		24						4	2			2		2	5				2	2	146	13,161	6.58
	DT					20		8	4	2	13	8	2	6	12		24						4	2			2		2	5				2	3	151	14,368	7.18
	TT					28		8	4	2	13	12	2	8	18		36						4	2			2		2	5				2	3	201	18,044	9.02
END BAY AT HEAD OF BRIDGE	SS	2	6	2	8			8	2		13	6	2	2	2		4				2		6	4			2		2	5				4	4	80	9,459	4.73
	DS	2	6	4	16			8	2		13	12	2	2	4		8				4		6	4			2		2	5				4	4	106	11,149	5.57
	TS	2	6	4	32			8	2		13	18	2	4	6		8	8			4	2	6	2			2		2	5				2	4	142	12,668	6.33
	DD	2	6	4	32	8		8	2		13	12	2	6	8		12				4		6	4			2		2	5				2	4	142	13,725	6.86
	TD	2	6	4	56	12		8	2		13	18	2	8	12		12	10			4	2	6	2			2		2	5				2	4	194	16,448	8.22
	DT	2	6	4	40	8		8	2		13	12	2	8	8		12				4		6	4			2		2	5				2	4	152	13,817	6.91
	TT	2	6	4	68	12		8	2		13	18	2	10	12		12				4	2	6	2			2		2	5				2	4	208	16,544	8.27

Table A-10 Number of parts per bay for class 80 bridges

ITEM	UNIT WEIGHT (lb)																				NUMBER OF UNITS	TOTAL WEIGHT (lb)	TOTAL WEIGHT (short tons)														
	PLATE, BASE	BEARER, FOOTWALK	BEARING	BOLT, BRACING, M-3 (WITH NUT)	BOLT, CHORD (WITH NUT)	BOLT, RIBBAND GUARDRAIL, T, M-3	BRACE, SWAY, M-3 (COMPLETE WITH PINS)	BRACE, SWAY, OVERHEAD EXTENSION, M-3 (WITH PIN)	CHESS, M-3	CLAMP, TRANSOM, M-3	FOOTWALK	FRAME, BRACING, M-3	PANEL	PEDESTAL RAMP, M-3	PIN, PANEL (COMPLETE WITH RETAINER CLIP)	PIN, PANEL, HEADLESS, M-3 (OO)	POST, END, FEMALE	POST, END, FEMALE, M-3	POST, END, MALE	POST, END, MALE, M-3				POST, FOOTWALK	RAKER, M-3	RAMP, PLAIN	RAMP, BUTON	RIBBAND, GUARDRAIL (STEEL)	RIBBAND, GUARDRAIL LONG (STEEL), M-3	STRINGER, BUTON	STRINGER, BUTON, LONG, M-3	STRINGER, PLAIN	STRINGER, PLAIN, LONG, M-3	SUPPORT, BRACING, OVERHEAD	PIECE, III	TRANSOM, M-3	
SS	381	22	66	1.0	7.5	.75	72.5	20	130	7	104	42	577	97	6.0	5.8	130	119	121	110	10	25	338	349	162	175	267	293	260	282	150	3.5	648				
DS	2	4	4	12		8	2		14	12	2	2	4		16		4	4			4	2				2		2	3					5	106	12,015	6.01
TS	2	4	4	20		8	2		14	18	2	2	6		20		4	4			4	2				2	2	2	3					5	134	13,511	6.76
DD	2	4	4	20	8	8	2		14	12	2	4	8		28		4	4			4	2				2	2	3	2					5	140	14,547	7.27
TD	2	4	4	32	12	8	2		14	18	2	4	12		36	6	4	4			4	2				2	2	3	2					5	184	7,267	8.63
DT	2	4	4	20	8	8	2		14	12	2	4	8		28		4	4			4	2				2	2	3	2					5	140	14,547	7.27
TT	2	4	4	32	12	8	2		14	18	2	4	12		36	6	4	4			4	2				2	2	3	2					5	184	17,267	8.63
SS																																					
DS		4		12		8	2		13	12	2	2	4		8						4	2					2		5					4	86	9,513	4.76
TS		4		24		8	2		13	18	2	4	6		12						4	6					2	2	5					4	110	10,779	5.39
DD		4		20	8	8	2		13	12	2	4	8		16						4	2					2	2	5					4	116	12,021	6.01
TD		4		36	12	8	2		13	18	2	6	12		24						4	12					2	2	5					4	154	14,499	7.25
DT		4		28	20	8	4	2	13	12	2	6	12		24						4	2					2	2	5					5	157	15,692	7.85
TT		4		48	28	8	4	2	13	18	2	8	18		36						4	2					2	2	5					5	209	19,382	9.69
SS																																					
DS	2	6	4	16		8	2		13	12	2	2	4		8					4	6	4				2		2	3					5	107	11,863	5.93
TS	2	6	4	32		8	2		13	18	2	4	6		8	8				4	6	2				2	2	2	3					5	143	13,362	6.69
DD	2	6	4	32	8	8	2		13	12	2	6	8		12					4	6	4				2	2	2	3					5	143	14,489	7.22
TD	2	6	4	56	12	8	2		13	18	2	8	12		12	10				4	6	2				2	2	2	3					5	195	17,162	8.58
DT	2	6	4	40	8	8	2		13	12	2	8	8		12					4	6	4				2	2	2	3					5	153	14,531	7.27
TT	2	6	4	68	12	8	2		13	18	2	10	12		12	10				4	6	2				2	2	2	3					5	209	17,258	8.63

Table A-11 Material requirements of the standard-design deck-type panel bridges

ITEM	UNIT WEIGHT (lb)	USE	SINGLE-STORY DECK-TYPE BRIDGE												DOUBLE-STORY DECK-TYPE BRIDGE													
			M2 PANEL-BRIDGE DECK				LAMINATED TIMBER DECK				LAYERED TIMBER DECK				M2 PANEL-BRIDGE DECK				LAMINATED TIMBER DECK				LAYERED TIMBER DECK					
			INTERIOR BAYS		TWO END BAYS		INTERIOR BAYS		TWO END BAYS		INTERIOR BAYS		TWO END BAYS		INTERIOR BAYS		TWO END BAYS		INTERIOR BAYS		TWO END BAYS		INTERIOR BAYS		TWO END BAYS			
			NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)	NUMBER RE-QUIRED	TOTAL WEIGHT (lb)				
Angle, 3"x3"x3/4"x24'0"	173	Bracing for timber floor					2	346	5	865	2	346	5	865					2	346	5	865	2	346	5	865		
Angle, 3"x3"x3/4"x29'6"	212	Cross bracing					1	212	2	424	1	212	2	424					1	212	2	424	1	212	2	424		
Angle, 3"x3"x3/4"x32'6"	234	Cross bracing, M2 bridge	1	234	2	468								1	234	2	468											
Bearing	68	End bearings			30	2,040			30	2,040			30	2,040			30	2,040			30	2,040			30	2,040		
Bolt, 3/4"x15"	2.18	Ribband, laminated and layered deck					8	18	20	44	8	18	20	44			8	18	20	44	8	18	20	44	8	18	20	44
Bolt, bracing	1	Bracing frames	40	40	40	40	40	40	40	40	40	40	40	40	80	80	40	40	80	80	40	40	80	80	40	40		
Bolt, ribband	1.5	Ribband, panel bridge deck	16	24	32	48								16	24	32	48											
Chess, M2	65	Floor, M2 bridge	26	1,690	52	3,380								26	1,690	52	3,380											
Frame, bracing	43.6	On end verticals of panels	10	436	10	436	10	436	10	436	10	436	10	436	20	872	10	436	20	872	10	436	20	872	10	436		
Nail, 40d	1/17	Wear surface	240	14	480	28	240	14	480	28	240	14	480	28	240	14	480	28	240	14	480	28	240	14	480	28		
Nail, 60d	1/10	Timber floor					200	19	400	38	266	25	532	51	200	19	400	38	266	25	532	51	200	19	400	38		
Panel	577	Trusses	15	8,655	30	17,310	15	8,655	30	17,310	15	8,655	30	17,310	30	17,310	30	17,310	30	17,310	30	17,310	30	17,310	30	17,310		
Pin, panel w/retainer clip	6.21	Panels and end posts	30	186	90	559	30	186	90	559	30	186	90	559	60	372	60	372	60	372	60	372	60	372	60	372		
Post, end, female	129.5	End of trusses			15	1,942			15	1,942			15	1,942			15	1,942			15	1,942			15	1,942		
Post, end, male	121	End of trusses			15	1,815			15	1,815			15	1,815			15	1,815			15	1,815			15	1,815		
Ribband, steel	215	Curbs	4	860	8	1,720	4	860	8	1,720	4	860	8	1,720	4	860	8	1,720	4	860	8	1,720	4	860	8	1,720		
Stringer, button	267	Deck	4	1,068	8	2,136								4	1,068	8	2,136											
Stringer, plain	260	Deck	8	2,080	16	4,160								8	2,080	16	4,160											
Timber, 3"x6"x12'0"	52.5	Laminated deck					40	2,100	80	4,200								40	2,100	80	4,200							
Timber, 3"x12"x10'0"	87.5	Wear surface	16	1,400	32	2,800	16	1,400	32	2,800	16	1,400	32	2,800	16	1,400	32	2,800	16	1,400	32	2,800	16	1,400	32	2,800		
Timber, 3"x12"x12'0"	105	Bottom layer of layered deck									10	1,050	20	2,100					10	1,050	20	2,100						
Timber, 3"x12"x17'6"	153	Top diagonal layer of layered deck									14	2,142	28	4,284					14	2,142	28	4,284						
Transom, M2	618	Deck, M2 bridge	4	2,472	9	5,562								4	2,472	9	5,562											
Total weight (lb)			19,159		44,444		14,286		34,261		15,384		36,458		28,476		44,257		23,603		34,074		24,701		36,271			
(ton)			9.6		22.2		7.1		17.1		7.7		18.2		14.2		22.1		11.8		17.0		12.4		18.1			

Table A-12 *Typical highway deck-type panel bridges built in ETO*

LOCATION	Tiber River, Borghetto, Italy	Autobahn highway, Bayreuth, Germany	Arno River, Pisa Italy	Po River, Ostiglia, Italy
SPAN	Continuous over four spans at 80', 90', 90' and 80'	Continuous over two 55' spans	Continuous over two 85' spans	Continuous over thirteen 100' spans
CAPACITY*				
ONE WAY	Class 80	Class 80	Unknown	Class 100
TWO WAY	Class 45	Class 45		Class 55
ROAD WIDTH (ft)	24	25	20	About 22
TRUSS CONSTRUCTION	18 trusses tied together by vertical bracing frames and tie plates into 2 five-truss and 2 four-truss girders	8 trusses tied together by vertical bracing frames into 4 two-truss girders	10 trusses tied together by vertical bracing frames into 5 two-truss girders	16 trusses tied together by vertical bracing frames into 8 two-truss girders
SPECIAL BRACING	3"x3" angle cross bracing welded under bottom chords	6" channels transverse to centerline of bridge welded to top and bottom chords at 20" spacings	10" steel I-beam floor beams welded across top chords at 2'6" spacings	Angle cross bracing welded under bottom chords
DECK	3 layers of 2" timber nailed to nailing strips bolted to trusses; bottom 2 layers laid diagonally, top layer laid transversely, and surfaced with bituminous surfacing	9" flooring nailed to nailing strips bolted to trusses	2 layers of 3" timber nailed to nailing strips bolted to floor beams	2 layers of timber nailed to nailing strips bolted to trusses; bottom layer laid transversely, top layer laid diagonally
LAUNCHING	Each girder launched separately; girder and launching nose pulled on rollers cut over gap	Each girder launched separately on rollers	Entire unit launched on rollers without a launching nose	Each girder lifted directly into place by pile-driving rig

*Capacities are those assigned to the bridge in the field; actual capacities may be greater

Table A-13 Typical railway panel bridges built in ETO

LOCATION	Kings Newton bridging school, Melbourne, Derby, England	Railway bridging school at Rakpa Mines, India	Sicily	Difanto River near Melfi, Italy
SPAN	90'	80'	120' (continuous over two 60' spans)	Three 60' spans
CAPACITY	2-8-0 armored locomotive (equivalent to Cooper's E-35)	16 B.S.S. (equivalent to Cooper's E-35)	Not known	Class 70 (modified Cooper's E-40)
NUMBER OF TRUSSES	QD	QD	TD	TD—Deck in top story
BRACING	Normal	Normal	Normal	Normal
DECKING	Ties on two lines of rail clusters (3 rails in each cluster); double transoms	6"x8"x7' ties at 1'8" centers; every third tie hook bolted to standard stringers; outer stringers omitted; double transoms	Every 7th tie spiked to standard chess on stringers; double transoms; timber treads built up on each side of rails for highway traffic	Ties at 2'6" centers; double transoms; ties bolted every 10' to plate under two transoms
BEARINGS	Standard end posts and bearings	Standard end posts and bearings		Standard end posts and bearings
CONSTRUCTION TIME				5 days
METHOD OF LAUNCHING				120' launched with 70' nose from one bank; 60' launched with tail from other bank
FIGURE REFERENCE	13-12	13-13	13-14	13-15
LOCATION	Cevaro River near Foggia, Italy	Durance River near Meyrargues, France	Durance River south of Sisteron, France	Durance River, Sisteron, France
SPAN	Three spans at 40', 80', and 40'	170' continuous over two spans of 80' and 90'	90' (continuous over two 40' spans and 10' spans and 10' wide pier)	60' span and 120' (continuous over two 60' spans)
CAPACITY	Class 70 (modified Cooper's E-40)	80-ton concentrated load string of 40-ton cars without locomotive	Modified Cooper's E-40	Modified Cooper's E-40
NUMBER OF TRUSSES	TD—deck in top story	8 trusses grouped into two 4-truss girders	6 trusses grouped into two 3-truss girders	6 trusses grouped into two 3-truss girders
BRACING	Normal	Bracing frames and tie plates	Tie plates in each girder; angle iron vertical cross bracing welded to panel verticals; horizontal braces welded to bottom chords adjacent to panel verticals	Bracing frames and tie plates—3" channel sway bracing welded under trusses
DECKING	Ties at 2'6" centers; every fourth tie bolted to plate under transoms; double transoms	Ties at 2'6" centers; chord bolted to trusses	Ties at 16" centers bolted to longitudinal timbers fixed to top chords of trusses	Ties at 2'6" centers bolted to trusses
BEARINGS	Standard end posts and bearings	Rigid distributing beam under two node points seated on timber at abutments and piers	Timber bearings	Underslung second story seated on timber at abutments; steel rocker bearings on timber pier cap
CONSTRUCTION TIME	5 days	23 days	9 days	20 days (including 60' panel crib pier)
METHOD OF LAUNCHING	120' launched with 70' nose from one bank; 40' launched from other bank	Each 170' truss placed by high line; bracing added after trusses were in place	Entire bridge cantilevered into place	60' and 120' trusses lifted directly into place by cranes
FIGURE REFERENCE	13-15		13-16	
LOCATION	Montrond bridge, Buech River, Serres, France	Pont d'Ain bridge, Ain River near Poncin, France	Suran River near Poncin, France	Arbois, France
SPAN	40' (continuous over two 20' spans)	170' (continuous over two 85' spans)	90'	70' (continuous over two 35' spans)
CAPACITY	Modified Cooper's E-40	Modified Cooper's E-40	Modified Cooper's E-40	Modified Cooper's E-40
NUMBER OF TRUSSES	4 trusses grouped into two 2-truss girders	9 trusses	10 trusses	6 trusses grouped into two 3-truss girders
BRACING	Tie plates in each girder; angle iron vertical cross bracing welded to panel verticals	Bracing frames, tie plates, and modified transoms	Bracing frames and tie plates; angle iron sway bracing welded under trusses	Tie plates in each girder; angle iron vertical cross bracing welded to panel verticals; horizontal braces welded to bottom chords adjacent to panel verticals
DECKING	Ties at 16" centers bolted to longitudinal timbers fixed to top chords of trusses	Ties at 2'6" centers, chord bolted to trusses	Ties at 2'6" centers, chord bolted to trusses	Ties at 16" centers bolted to longitudinal timbers fixed to top chords of trusses
BEARINGS	Timber bearings		Rigid distribution beam under two node points at each end; one end on steel plate for expansion	Timber bearings
CONSTRUCTION TIME	3 days		4 days	
METHOD OF LAUNCHING	Trusses positioned manually	Entire unit launched with 4-truss launching nose; launching links between 2nd and 3rd bays; bridge pulled across by winch, 16 jacks used to jack down	Entire bridge launched with 4-truss launching nose; bracing frames on top chord during launching only	Entire bridge launched on rollers
FIGURE REFERENCE	13-17			
LOCATION	Doubs River, Dole, France	Langley bridge, Moselle River near Charmes, France		
SPAN	460' (continuous over six 76½' spans)	450' (continuous over seven 64' spans)		
CAPACITY	Modified Cooper's E-40	Modified Cooper's E-40		
NUMBER OF TRUSSES	10 trusses grouped into two 5-truss girders	8 trusses		
BRACING	Tie plates in each girder; 4"—channel vertical cross bracing welded to panel verticals; 4"—channel horizontal braces welded to top and bottom chords in each bay	Bracing frames, tie plates, and transoms; 3"—angle sway bracing welded under trusses		
DECKING	Ties at 2'6" centers, chord bolted to trusses	Ties at 2'6" centers, chord bolted to trusses		
BEARINGS	Steel distributing plate under two node points set on timber pier caps; angle cleats for side guides	Modified end posts at abutments; 8'9" distributing beam under 3 node points over piers; distributing beam rocks on standard bearings on greased steel plates between angle guides		
CONSTRUCTION TIME	20 days	19 days		
METHOD OF LAUNCHING	one half of bridge cantilevered out from each bank; no launching nose; pulled across by winch	260' pulled by winch from one bank; 190' pulled from other bank; no launching nose used		

Table A-14 Strength of individual panel-crib parts

PART	LOAD	STRENGTH (TONS)	ILLUSTRATION
Span junction post	(1) Shear across joint	20	(1)
	(2) Moment of resistance to bending when launching link Mk II is in position; with no shear across joint	380 ft-tons	(2)
	With 20-ton shear across joint	360 ft-tons	
Junction link	(3) Vertical load	25	(3)
Junction-link bearing	(4) Load at center when supported at ends only	14	(4)
	(5) Load at center when supported for full length	25	
Crib capsill	(6) When supported at ends and center reinforced holes with load on two intermediate reinforced holes	9	(6)
	(7) When supported at intermediate reinforced holes with load on two center reinforced holes	4.5	(7)
	(8) When supported at end and center reinforced holes with distributed load	18	(8)
	(9) When supported along entire length by a panel chord with load on two center reinforced holes	17	(9)
	(10) Tension between any two reinforced holes	34	(10)
Chord clamp	(11) Tension	17	(11)

Note: See Table 22-1 for strength of launching link Mk II, panel pin, panel, and bearing

