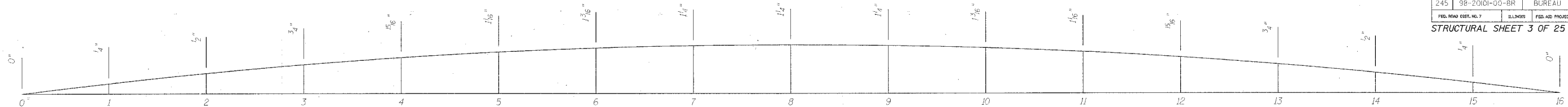
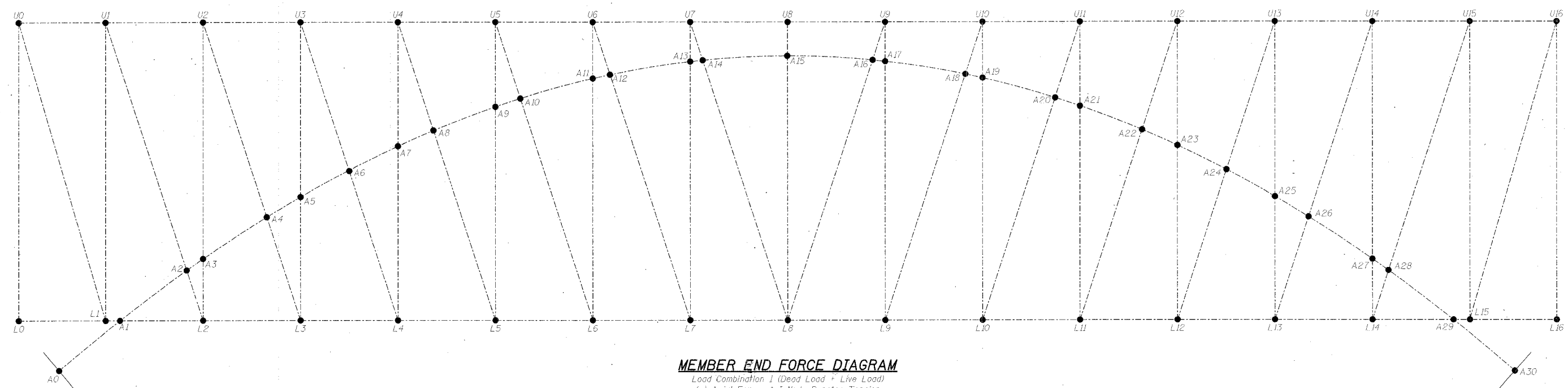


PROJECT	SECTION	COUNTY	SHEET	OF
245	98-20101-00-BR	BUREAU	65	36
FED. ROAD DIST. NO. 7		S.D. NO. 1		FED. AID PROJECT - (305-01162)

STRUCTURAL SHEET 3 OF 25



DEAD LOAD CAMBER DIAGRAM
Deflections Shown Apply to Upper and Lower Truss Chords



MEMBER END FORCE DIAGRAM
Load Combination 1 (Dead Load + Live Load)
(-) Axial Force at I Node Denotes Tension
(+) Live Load = Snow + Roadway Traffic

LOAD TABLE

Member Location	I Node	J Node	I Node			J Node		
			Axial k	Shear k	Moment ft-k	Axial k	Shear k	Moment ft-k
Truss Chord	L0	L1	0.17	29.67	1.30	0.23	-27.29	13.67
Truss Chord	L1	L2	-20.80	26.42	13.98	-20.70	-28.08	23.03
Truss Chord	L2	L3	-33.59	28.20	23.03	-33.51	-26.40	15.31
Truss Chord	L3	L4	-42.81	27.04	15.20	-42.75	-27.53	17.90
Truss Chord	L4	L5	-50.13	27.37	17.82	-50.08	-27.14	17.41
Truss Chord	L5	L6	-55.01	27.25	17.33	-54.98	-27.23	17.99
Truss Chord	L6	L7	-57.82	27.27	17.91	-57.81	-27.21	17.95
Truss Chord	L7	L8	-59.54	26.88	17.82	-59.56	-27.54	20.80
Truss Chord	L8	L9	-59.56	27.55	20.81	-59.54	-26.88	17.75
Truss Chord	L9	L10	-57.80	27.19	17.89	-57.81	-27.29	17.99
Truss Chord	L10	L11	-54.98	27.24	18.06	-55.01	-27.24	17.32
Truss Chord	L11	L12	-50.08	27.14	17.40	-50.13	-27.37	17.82
Truss Chord	L12	L13	-42.75	27.53	17.90	-42.82	-27.04	15.20
Truss Chord	L13	L14	-33.51	26.40	15.31	-33.59	-28.19	23.00
Truss Chord	L14	L15	-20.70	28.08	23.03	-20.80	-26.42	13.98
Truss Chord	L15	L16	0.23	27.30	13.67	0.17	-29.66	1.30
Truss Chord	U0	U1	2.71	6.60	21.94	12.71	6.18	-17.70
Truss Chord	U1	U2	25.54	-1.86	-16.25	25.54	-2.33	-4.85
Truss Chord	U2	U3	36.62	1.25	-4.43	36.62	0.78	-7.40
Truss Chord	U3	U4	44.86	-0.44	-7.01	44.86	-0.91	-6.87
Truss Chord	U4	U5	49.46	-0.40	-6.67	49.46	-0.86	-6.80
Truss Chord	U5	U6	51.28	0.80	-6.78	51.28	-0.87	-6.96
Truss Chord	U6	U7	50.87	-1.05	-7.15	50.87	-1.52	4.95
Truss Chord	U7	U8	48.99	0.64	4.56	48.99	0.74	-4.98
Truss Chord	U8	U9	48.87	0.74	-4.93	48.87	-0.64	4.60
Truss Chord	U9	U10	50.62	1.53	4.98	50.52	1.06	-7.22
Truss Chord	U10	U11	51.26	0.85	-7.03	51.26	-0.82	-6.71
Truss Chord	U11	U12	49.43	0.87	-6.73	49.43	0.41	-6.68
Truss Chord	U12	U13	44.84	0.91	-6.88	44.84	0.44	-7.01
Truss Chord	U13	U14	36.61	-0.78	-7.40	36.61	-1.25	-4.42
Truss Chord	U14	U15	25.54	2.33	-4.83	25.54	1.86	-15.26
Truss Chord	U15	U16	12.71	-6.18	-17.71	12.71	-6.60	27.94

LOAD TABLE

Member Location	I Node	J Node	I Node			J Node		
			Axial k	Shear k	Moment ft-k	Axial k	Shear k	Moment ft-k
Truss Vertical	L0	U0	97.67	-0.04	1.11	95.62	-0.04	1.26
Truss Vertical	L1	U1	53.20	0.00	-0.01	51.55	0.00	0.06
Truss Vertical	L2	U2	37.29	0.70	0.00	36.79	0.70	-3.95
Truss Vertical	A3	U2	59.44	-0.21	-3.87	58.29	-0.21	-0.69
Truss Vertical	L3	U3	28.99	-0.27	0.00	28.11	-0.27	2.83
Truss Vertical	A5	U3	50.27	-0.30	-2.99	49.50	-0.30	-1.02
Truss Vertical	L4	U4	18.01	0.17	0.00	19.24	0.17	-2.53
Truss Vertical	A7	U4	44.68	-0.30	-2.98	44.25	-0.30	-1.07
Truss Vertical	L5	U5	24.85	0.13	0.00	26.29	0.13	-2.37
Truss Vertical	A9	U5	40.06	-0.44	-2.93	39.85	-0.44	-1.56
Truss Vertical	L6	U6	30.73	-0.10	0.00	32.35	-0.11	2.10
Truss Vertical	A11	U6	33.66	-0.78	-2.87	33.63	-0.78	-2.83
Truss Vertical	L7	U7	33.50	0.07	0.00	35.15	0.07	-1.49
Truss Vertical	A13	U7	36.22	-0.73	-2.34	36.23	-0.73	-1.54
Truss Vertical	L8	U8	5.91	-0.03	0.00	7.57	-0.03	-0.57
Truss Vertical	A15	U8	8.37	0.37	1.04	8.39	0.37	-0.60
Truss Vertical	L9	U9	33.44	-0.07	0.00	35.10	-0.07	1.49
Truss Vertical	A17	U9	36.15	0.73	2.35	36.16	0.73	1.55
Truss Vertical	L10	U10	30.73	-0.11	0.00	32.35	-0.11	2.09
Truss Vertical	A19	U10	33.51	0.62	2.76	33.48	0.62	2.22
Truss Vertical	L11	U11	24.83	-0.13	0.00	26.27	-0.13	2.37
Truss Vertical	A21	U11	40.11	0.44	2.93	39.90	0.44	1.56
Truss Vertical	L12	U12	18.01	-0.17	0.00	19.24	-0.17	2.52
Truss Vertical	A23	U12	44.68	0.31	2.98	44.26	0.31	1.07
Truss Vertical	L13	U13	28.98	-0.27	0.00	28.10	-0.27	2.83
Truss Vertical	A25	U13	50.26	0.30	-2.99	49.49	0.30	-1.02
Truss Vertical	L14	U14	37.29	-0.70	0.00	36.79	-0.70	3.95
Truss Vertical	A27	U14	59.42	0.21	3.88	58.28	0.21	0.69
Truss Vertical	L15	U15	53.19	0.00	0.01	51.54	0.00	-0.06
Truss Vertical	L16	U16	97.67	0.04	1.41	95.62	0.04	1.26

LOAD TABLE

Member Location	I Node	J Node	I Node			J Node		
			Axial k	Shear k	Moment ft-k	Axial k	Shear k	Moment ft-k
Truss Diagonal	L1	U0	-75.52	0.13	0.00	-74.64	-0.13	0.00
Truss Diagonal	L2	U1	-55.73	-0.91	0.00	-55.89	-0.97	4.53
Truss Diagonal	A2	U1	-51.53	0.33	4.50	-52.24	0.19	0.00
Truss Diagonal	L3	U2	-44.46	-0.29	0.00	-44.78	-0.39	3.14
Truss Diagonal	A4	U2	-50.09	0.29	3.28	-50.65	0.11	0.00
Truss Diagonal	L4	U3	-41.38	-0.13	0.00	-41.83	-0.27	2.66
Truss Diagonal	A6	U3	-43.09	0.31	2.96	-43.52	0.17	0.00
Truss Diagonal	L5	U4	-37.18	-0.06	0.00	-37.75	-0.25	2.59
Truss Diagonal	A8	U4	-37.24	0.37	2.94	-37.56	0.27	0.00
Truss Diagonal	L6	U5	-34.35	-0.03	0.00	-35.01	-0.24	2.57
Truss Diagonal	A10	U5	32.75	0.50	2.99	32.98	0.43	0.00
Truss Diagonal	L7	U6	-32.50	0.02	0.00	-33.23	-0.23	2.41
Truss Diagonal	A12	U6	-26.77	0.69	2.98	-26.93	0.64	0.00
Truss Diagonal	L8	U7	-34.23	0.05	0.00	-35.00	-0.21	1.96
Truss Diagonal	A14	U7	28.39	0.81	2.61	28.28	0.78	0.00
Truss Diagonal	L9	U8	-34.12	0.05	0.00	-34.90	-0.21	1.97
Truss Diagonal	A16	U8	28.35	0.81	2.61	28.24	0.78	0.00
Truss Diagonal	L10	U9	-32.49	0.02	0.00	-33.22	-0.23	2.41
Truss Diagonal	A18	U9	-26.65	0.69	2.99	-26.81	0.64	0.00
Truss Diagonal	L11	U10	-34.42	-0.03	0.00	-35.08	-0.24	2.57
Truss Diagonal	A20	U10	-32.77	0.50	2.99	-32.99	0.43	0.00
Truss Diagonal	L12	U11	-37.19	-0.06	0.00	-37.76	-0.25	2.59
Truss Diagonal	A22	U11	-37.27	0.37	2.94	-37.58	0.27	0.00
Truss Diagonal	L13	U12	-41.58	-0.13	0.00	-41.83	-0.27	2.66
Truss Diagonal	A24	U12	43.07	0.31	2.96	43.50	0.17	0.00
Truss Diagonal	L14	U13	-44.45	-0.29	0.00	-44.77	-0.39	3.15
Truss Diagonal	A26	U13	-50.08	0.29	3.28	-50.64	0.11	0.00
Truss Diagonal	L15	U14	-55.72	-0.91	0.00	-55.89	-0.97	4.53
Truss Diagonal	A28	U14	-51.52	0.33	4.50	-52.24	0.19	0.00
Truss Diagonal	L16	U15	-75.52	0.13	0.00	-74.64	-0.13	0.00

LOAD TABLE

Arch forces listed in this table are for each individual Arch.

Member Location	I Node	J Node	I Node			J Node		
			Axial k	Shear k	Moment ft-k	Axial k	Shear k	Moment ft-k
Arch	A0	A1	131.25	4.65	9.83	131.25	2.99	13.78
Arch	A1	A2	131.22	-2.96	14.63	131.10	-6.58	-13.65
Arch	A2	A3	128.90	-6.19	-18.32	128.85	-6.81	-22.71
Arch	A3	A4	120.10	7.05	-22.75	120.10	4.32	-6.07
Arch	A4	A5	120.53	-5.29	-6.30	120.45	-7.01	-15.70
Arch	A5	A6	115.12	6.66	-15.54	115.12	4.44	5.47
Arch	A6	A7	115.18	-4.03	5.51	115.11	-6.26	-15.13
Arch	A7	A8	110.53	7.23	-14.87	110.55	5.47	-6.12
Arch	A8	A9	110.37	-2.35	3.98	110.32	-5.78	-13.60
Arch	A9	A10	106.41	7.19	-15.35	106.45	5.88	-7.67
Arch	A10	A11	106.05	3.01	3.68	106.02	-5.62	-12.16
Arch	A11	A12	102.93	6.27	-11.82	102.96	5.31	-9.18
Arch	A12	A13	102.60	3.90	-5.65	102.58	-6.00	-11.44
Arch	A13	A14	100.79	10.26	-11.07	100.81	3.96	-9.44
Arch	A14	A15	101.67	5.83	-7.77	101.67	-3.92	6.69
Arch	A15	A16	101.60	3.93	6.74	101.59	-5.79	-7.73
Arch	A16	A17	100.79	-3.99	-9.42	100.76	-10.27	-11.06
Arch	A17	A18	102.58	5.98	-11.44	102.59	-3.91	-5.75
Arch	A18	A19	102.96	-5.33	-9.31	102.94	-6.29	-11.76
Arch	A19	A20	105.97	5.58	-12.11	105.99	-3.04	3.75
Arch	A20	A21	106.40	-5.88	-7.66	106.37	-7.19	-13.34
Arch	A21	A22	110.29	5.78	-13.60	110.34	2.35	3.98
Arch	A22	A23	110.52	-5.46	-6.12	110.50	-7.23	-14.87
Arch	A23	A24	115.10	6.26	-15.11	115.16	4.03	5.51
Arch	A24	A25	115.11	-4.45	5.47	115.11	-6.66	-15.54
Arch	A25	A26	120.44	7.01	-15.69	120.52	5.29	-6.30
Arch	A26	A27	120.10	-4.32	-6.07	120.09	-7.05	-22.74
Arch	A27	A28	128.85	6.81	-22.71	128.90	6.19	