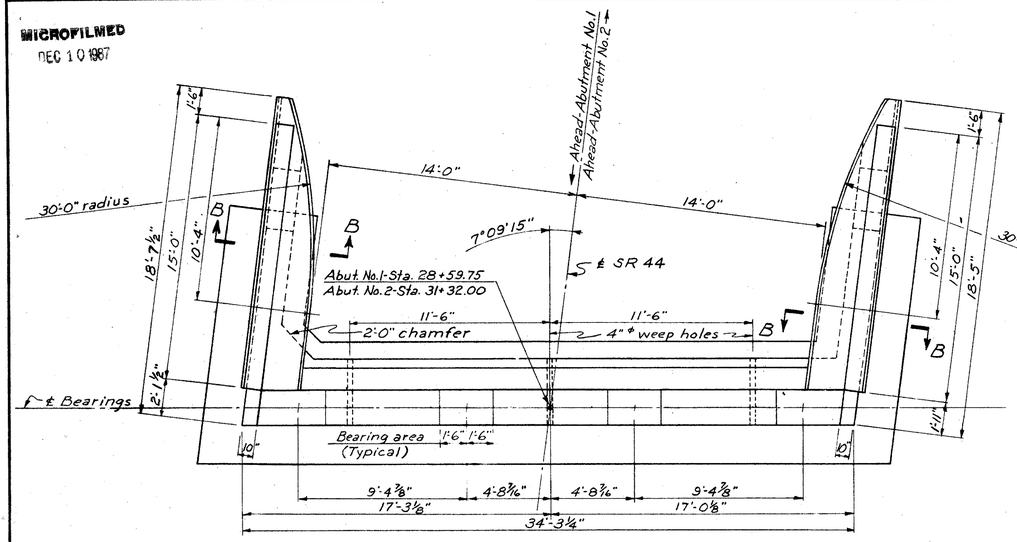
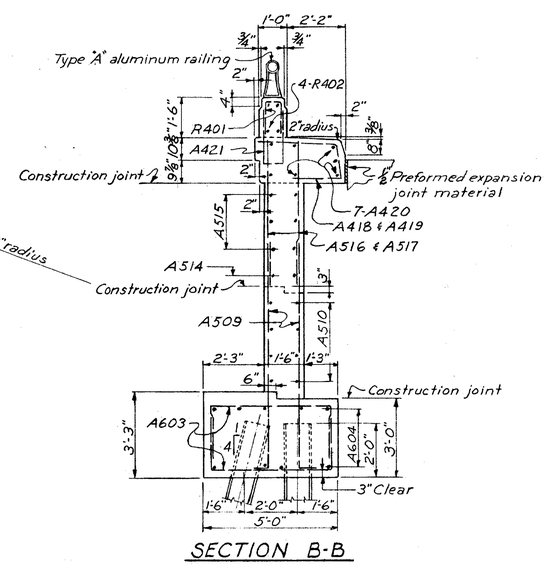
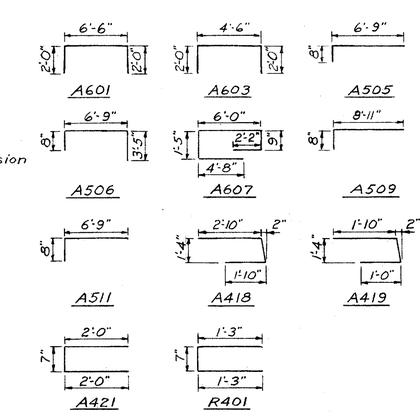
MICROFILMED
DEC 10 1987



ABUTMENT PLAN
(Piles not shown)



SECTION B-B



BAR BEND DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	ACI-1103(21)	

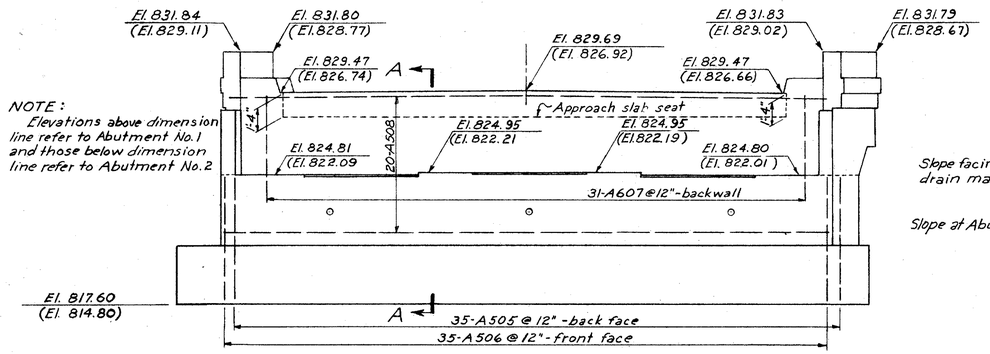
442
488

LAKE COUNTY
SEC. LAK-1-12.89

ABUTMENT BAR LIST

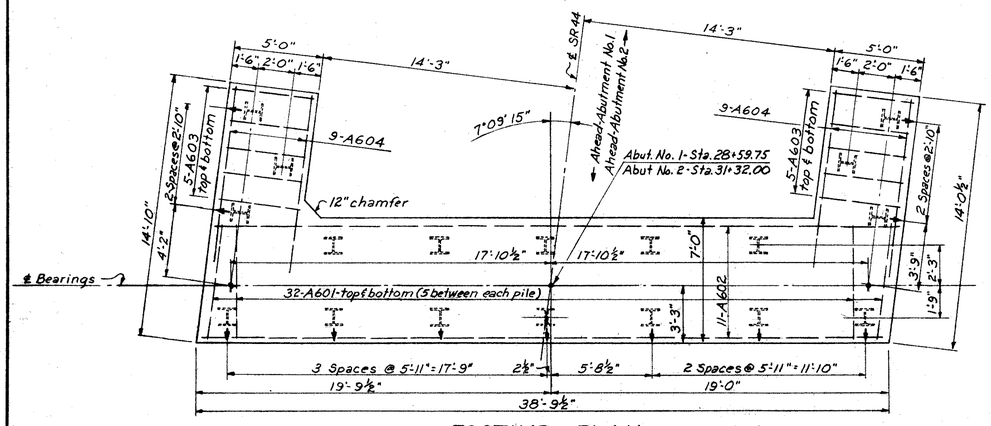
MARK	NO. REQ'D ABUT. 1	ABUT. 2	TOTAL	SIZE	LENGTH	TYPE	WEIGHT
A601	64	64	128	6	10'-2"	Bent	1955
A602	11	11	22	6	38'-3"	Str.	1264
A603	20	20	40	6	8'-2"	Bent	491
A604	18	18	36	6	10'-0"	Str.	541
A505	35	35	70	5	7'-3"	Bent	529
A506	35	35	70	5	10'-7"	Bent	772
A607	31	31	62	6	14'-4"	Bent	1334
A508	20	20	40	5	33'-9"	Str.	1408
A509	40	40	80	5	9'-5"	Bent	801
A510	16	16	32	5	10'-9"	Str.	359
A511	8	8	16	5	7'-3"	Bent	121
A512	8	8	16	5	5'-4"	Str.	89
A513	16	16	32	5	3'-7"	Str.	119
A514	4	4	8	5	10'-0"	Str.	83
A515	12	12	24	5	16'-2"	Str.	405
A516	40	40	80	5	5'-0"	Str.	417
A517	28	28	56	5	3'-6"	Str.	204
A418	20	20	40	4	5'-10"	Bent	156
A419	14	14	28	4	4'-0"	Bent	75
A420	14	14	28	4	15'-10"	Str.	296
A421	32	32	64	4	4'-5"	Bent	189
R401	32	32	64	4	2'-11"	Bent	*
R402	8	8	16	4	14'-8"	Str.	*
					TOTAL WEIGHT		11,608

* Include with railing for payment

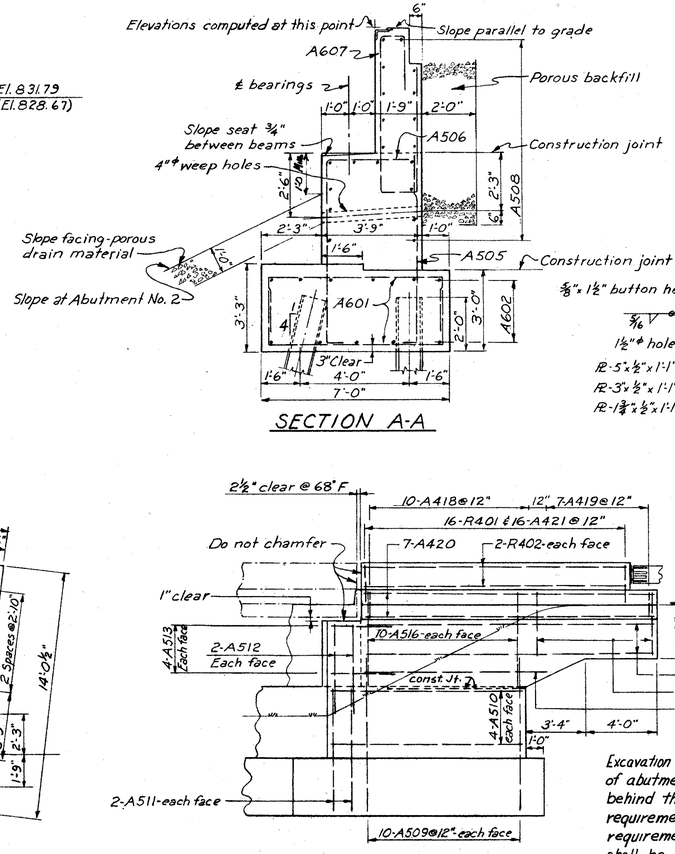


NOTE:
Elevations above dimension line refer to Abutment No.1 and those below dimension line refer to Abutment No.2

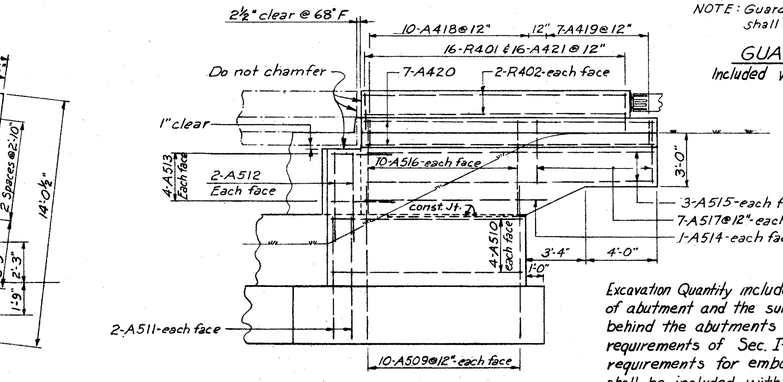
ELEVATION
(Piles not shown)



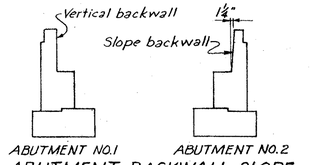
FOOTING PLAN



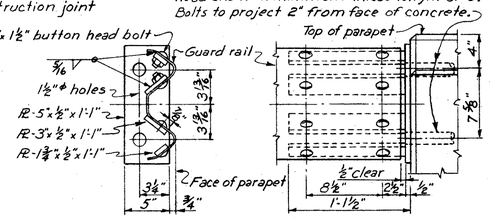
SECTION A-A



WING ELEVATION
(Piles not shown)



ABUTMENT BACKWALL SLOPE



NOTE: Guard rail end connection assembly shall be galvanized after welding.

GUARD RAIL DETAIL
Included with item S-14 for payment

Excavation Quantity includes the removal of material between the bottom of abutment and the surface of the proposed embankment. Backfill behind the abutments shall be made with material meeting the requirements of Sec. I-22 and shall be compacted in accordance with requirements for embankment compaction. Payment for backfill shall be included with item E-2, unclassified excavation.

NOTES

- PILES shall be driven to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 5-18.05 is not less than the following value for a pile hammer of the indicated energy rating:
  44 tons per pile using a 7,000 ft. lb. hammer
  37 tons per pile using a 11,000 ft. lb. hammer
  35 tons per pile using a 15,000 ft. lb. or greater hammer
  If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 25 tons per pile for the abutment piles.
- POROUS BACKFILL, 2 feet thick, full length of the abutment shall extend up to the underside of the approach slab and outward to the wings. Excavation therefore, in excess of that required for the abutment shall be considered as included in the bid price per cu. yd. for porous backfill.
- All abutment concrete shall be Class "E", except for the railing parapet which shall be Class "C".
- PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade after which excavation shall be made for the abutment.

SEC. C-32 FED. AID PROJ. NO. ACI-1103(21)

PREPARED BY
CAPITOL ENGINEERING ASSOCIATES, DILLSBURG, PA.
FOR
STATE OF OHIO
DEPARTMENT OF HIGHWAYS

ABUTMENT DETAILS
BRIDGE NO. LAK-1-1493
S.R.1 UNDER EXIST. S.R.44
LAKE COUNTY
STA. 434+55.38

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
JFM	JFM		C.		