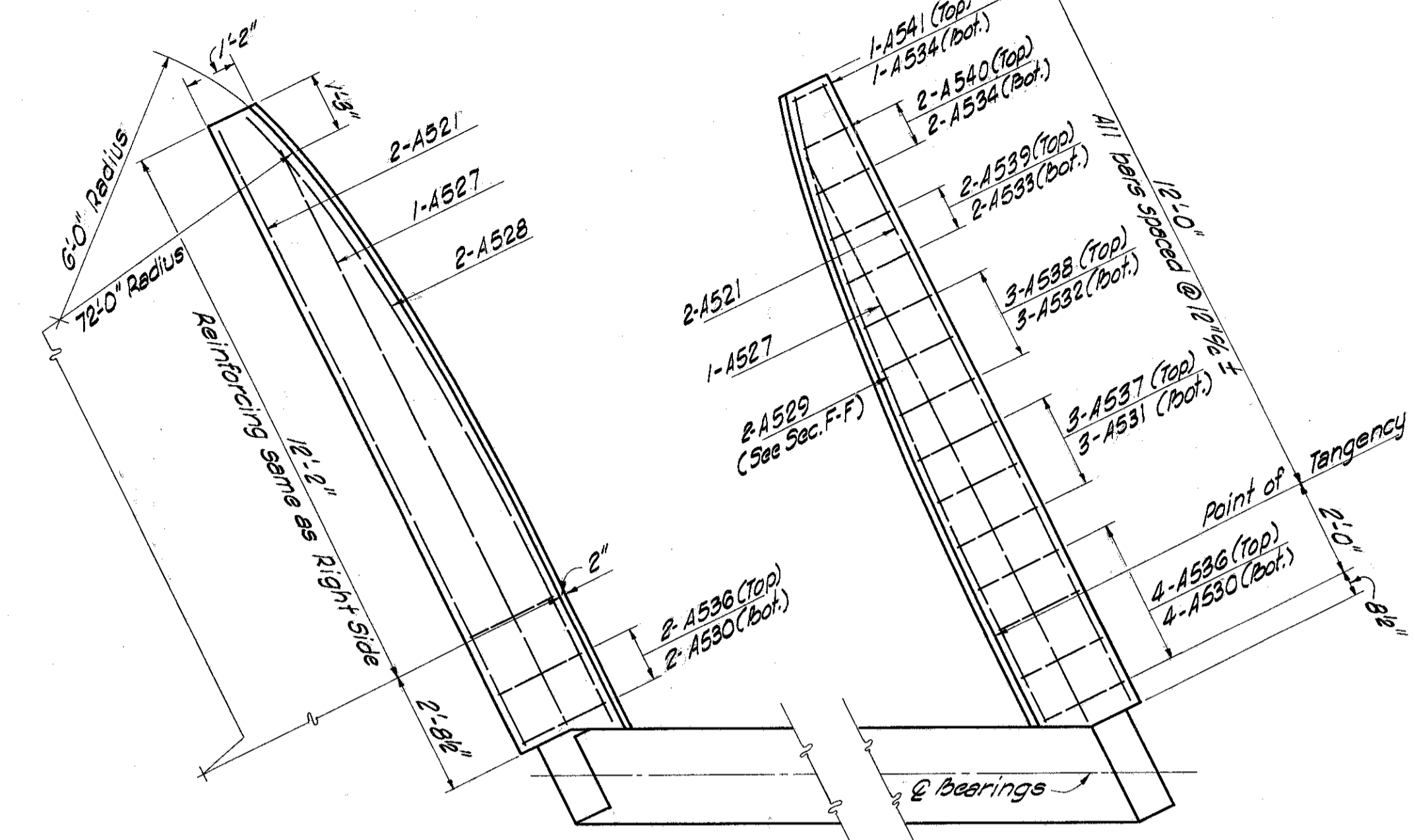
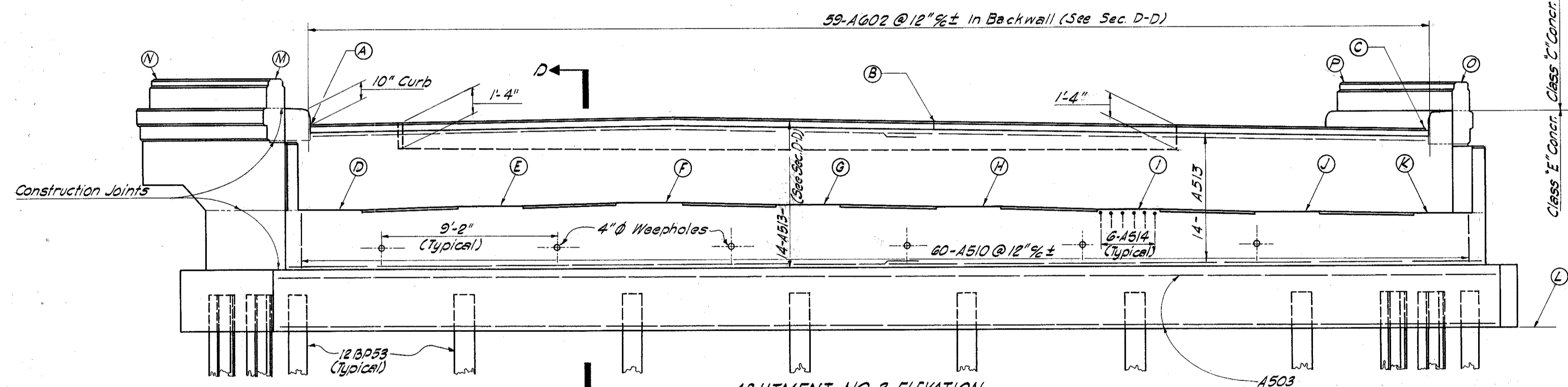


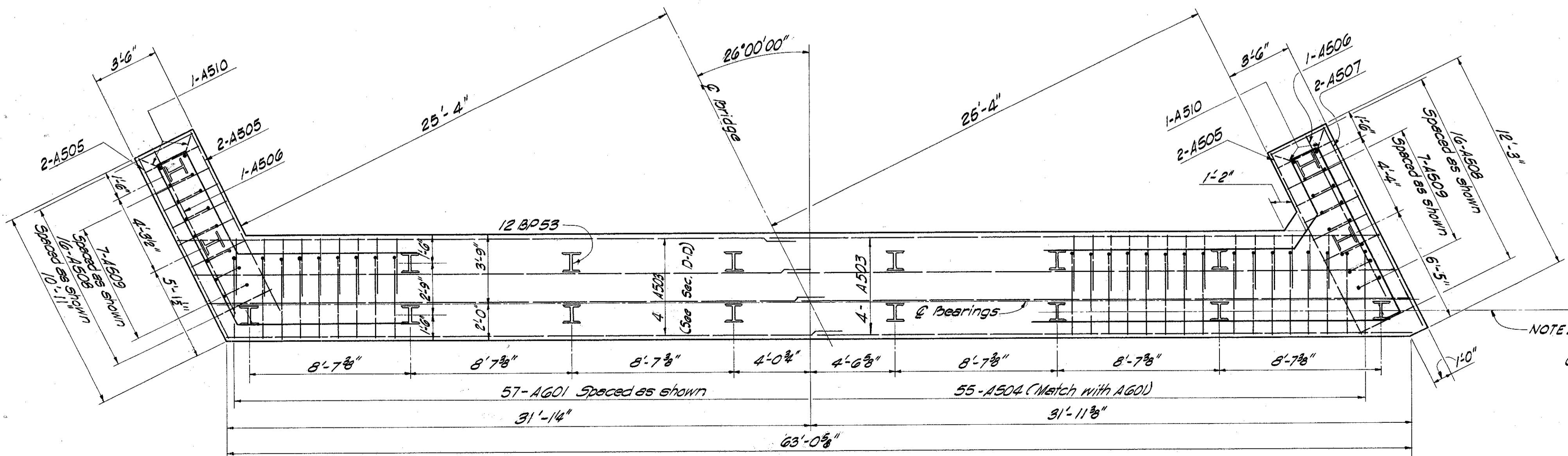
**ABUTMENT NO. 3 PLAN**  
(Abutment No. 1 Similar, See Elevation Location Diagram)



**WINGWALL PLAN**  
(Same for all four abutments)



**ABUTMENT NO. 3 ELEVATION**  
(Abutment No. 1 Similar, See Elevation Location Diagram)



**ABUTMENT NO. 1 and NO. 3 FOOTING PLAN**

- PILING NOTES**
- Piles shall be driven with a hammer of not less than 11,000 ft. lbs. per blow energy rating 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. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating.  
65 tons per pile using a 11000 ft. lb. hammer.  
58 tons per pile using a 15000 ft. lb. hammer.  
If the energy rating of the hammer is between the ratings shown above, the required formula capacity shall be determined by interpolation. The design load is 40 tons per pile.

**GENERAL NOTES**

- Porous backfill 2 feet thick full length of abutments shall extend up to the underside of the approach slab or up to the finished ground surface.
- Clearance of reinforcing steel from face of concrete shall be 2" unless other shown.
- Concrete above bridge seat construction joint shall not be placed until after the steelwork is erected, but shall be placed before placing deck slab.
- Steel end dam shall be used as a template for the top of the backwall.
- PROCEDURE:** The embankment shall be placed and compacted to subgrade elevation, after which excavation shall be made for the abutments.
- All abutment concrete shall be Class "E".
- All parapet concrete shall be Class "C".
- Guard Rail End Connection to be included with railing for payment.
- Design Foundation Pressure for Abutments No. 2 & No. 4 is 4 Tons per sq. ft.

This drawing to work with Abutments - Sections & Details sheet.

MICHAEL BAKER JR., CONSULTING ENGINEERS ROCHESTER, PENNSYLVANIA					
<b>ABUTMENTS</b>					
NO. 1 & NO. 3 PLAN & ELEVATION BRIDGE NO. LAK-I-0505 OVER CHAGRIN RIVER					
LAKE COUNTY					STA. 273 + 53.50
					TO 276 + 46.50
Designed	Drawn	Traced	Checked	Reviewed-Date	Revised
C.P.J.			J.V.H.	W.B.B. 4-25-58	