

Vol. Exc. =  $\frac{(0+18) \times 14}{54} = 4.7$  Cu. Yds.  
Vol. Emb. = 0

Vol. Emb. =  $\frac{(18+0) \times 16}{54} = 5.3$  Cu. Yds.

Vol. Emb. =  $\frac{(18+11) \times 100}{54} = 53.7$  Cu. Yds.

Vol. Emb. =  $\frac{(11+0) \times 100}{54} = 20.4$  Cu. Yds.

Vol. Exc. =  $\frac{(0+20) \times 55}{54} = 20.4$  Cu. Yds.  
Vol. Emb. =  $\frac{(0+22) \times 55}{54} = 22.9$  Cu. Yds.

Vol. Exc. =  $\frac{(20+12) \times 55}{54} = 32.6$  Cu. Yds.  
Vol. Emb. =  $\frac{(22+0) \times 55}{54} = 22.4$  Cu. Yds.

Vol. Exc. =  $\frac{(12+0) \times 29}{54} = 6.4$  Cu. Yds.

(For Plan View See Sheet 22)

**TOTAL VOLUME**  
Excavation = 59.4 Cubic Yards  
Embankment = 124.2 Cubic Yards  
Seeding & Mulching = 872.6 Sq. Yds.

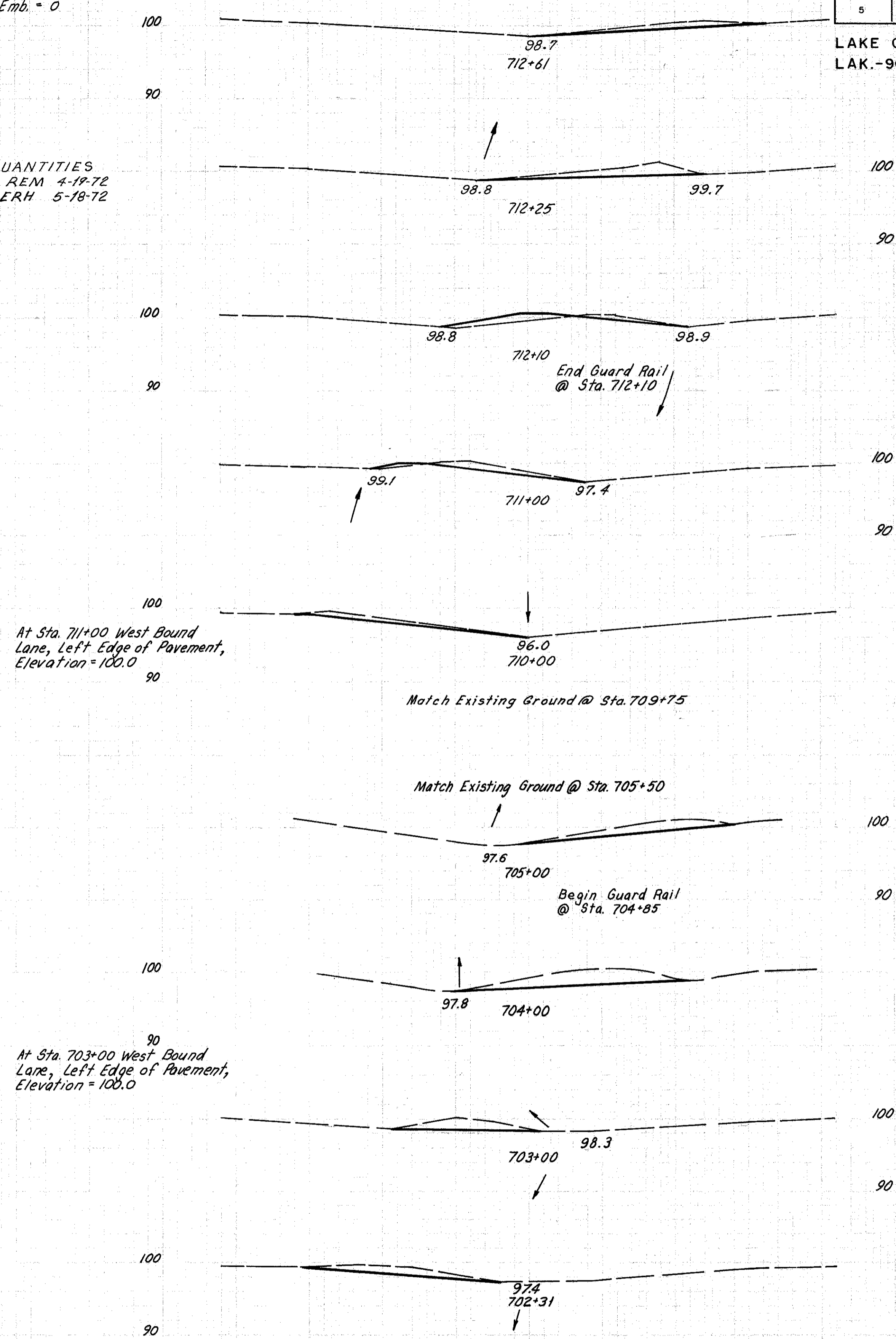
HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
CONSULTING ENGINEERS  
KANSAS CITY CLEVELAND NEW YORK

4-18-72  
4-19-72  
4-19-72  
4-19-72  
4-19-72

REM  
REM  
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REM  
REM

Vol. Exc. =  $\frac{(0+18) \times 14}{54} = 4.7$  Cu. Yds.  
Vol. Emb. = 0

QUANTITIES  
Made: REM 4-19-72  
Ckd: ERH 5-18-72



Vol. Exc. =  $\frac{(18+25) \times 36}{54} = 28.7$  Cu. Yds.  
Vol. Emb. = 0

Vol. Exc. =  $\frac{(25+8) \times 15}{54} = 9.2$  Cu. Yds.  
Vol. Emb. =  $\frac{(0+11) \times 15}{54} = 3.1$  Cu. Yds.

Vol. Exc. =  $\frac{(8+12) \times 110}{54} = 40.7$  Cu. Yds.  
Vol. Emb. =  $\frac{(11+2) \times 110}{54} = 26.5$  Cu. Yds.

Vol. Exc. =  $\frac{(12+18) \times 100}{54} = 55.6$  Cu. Yds.  
Vol. Emb. =  $\frac{(2+0) \times 100}{54} = 3.7$  Cu. Yds.

Vol. Exc. =  $\frac{(18+0) \times 25}{54} = 8.3$  Cu. Yds.  
Vol. Emb. = 0

Vol. Exc. =  $\frac{(0+28) \times 50}{54} = 25.9$  Cu. Yds.  
Vol. Emb. = 0

Vol. Exc. =  $\frac{(28+42) \times 100}{54} = 129.6$  Cu. Yds.  
Vol. Emb. = 0

Vol. Exc. =  $\frac{(42+22) \times 100}{54} = 118.5$  Cu. Yds.  
Vol. Emb. = 0

Vol. Exc. =  $\frac{(22+20) \times 69}{54} = 53.7$  Cu. Yds.  
Vol. Emb. = 0

Vol. Exc. =  $\frac{(20+0) \times 20}{54} = 7.4$  Cu. Yds.  
Vol. Emb. = 0

**TOTAL VOLUME**  
Excavation = 477.6 Cubic Yards  
Embankment = 33.3 Cubic Yards  
Seeding & Mulching = 1940 Sq. Yds.

FED. RD. DIVISION	STATE	PROJECT	77 III
5	OHIO		

LAKE COUNTY  
LAK. -90-3.56.