| FHWA REGION | STATE | PROJECT | |
|---|---|---|---|
| 5 | OHIO | | |

17/32

LAKE COUNTY
LAK-608-03.35

# ~ GENERAL NOTES ~

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:
BR-1-67 (Revised) 10-15-71 Sheet No. 1 of 3
SD-1-69 Dated 6-12-69 Sheets No. 1 and No. 2 of 4
PSBD-1-71 Dated 9-1-71 Sheets No. 1, No. 2 and No. 3 and to Supp. Spec. 836 dated 3-12-75.

DESIGN SPECIFICATIONS: This structure conforms to "Standard specifications for highway bridges" adopted by the American Association of State Highway Officials, 1973, including the 1974, 1975 and 1976 interim specifications and the ohio "Supplement" to these specifications.

DESIGN DATA:
Design Loading ~ H520-44 and the alternate military loading
Concrete Class C ~ Unit stress 1200 P.S.I. for superstructure
~ Unit stress 1333 P.S.I. for substructure
Structural Steel ~ ASTM A36 ~ Unit Stress 20,000 P.S.I.
Reinforcing Steel ~ ASTM A615, A616 or A617 ~ Unit Stress 20,000 P.S.I.
Concrete for Prestressed Concrete Beams ~ Unit Stress 2200 P.S.I. compression, 444 P.S.I. tension
Prestressing Strand ~ ASTM A416 ~ F's = 270,000 P.S.I.
initial stress = 0.70 F's
for Abutment Nos. 1 and 2

PILES shall be driven to bedrock. The bearing capacity shall be considered obtained by refusal on hard bedrock or by penetrating soft bedrock for several inches with a minimum resistance of 20 blows per inch. The design load is 38 tons per pile. Design load for piles of Pier Nos. 1 and 4, which shall be placed in prebored holes (see Sh. 5/11) is 40 tons per pile.

FOUNDATION BEARING PRESSURE: Pier No. 2 and No. 3 Footings are designed for a maximum bearing pressure of 3 tons per sq. ft. and 2.5 tons per sq. ft. for retaining wall.

CONSTRUCTION CLEARANCE OF 8'-0" Horizontally from the center of tracks and 20'-0" Vertically from a point level with the top of the higher rail, and 4 feet from the center of tracks shall be maintained at all times.

BRIDGE TERMINAL ASSEMBLY, TYPE A: At the three specified locations (see Sheets 2/32 and 6/32), concrete insert anchor assemblies per GR-1 and GR-3 shall be placed during parapet construction.

FOOTINGS for Piers 2 and 3 shall extend a minimum of 3" into shale or to the elevation shown, whichever is lower.

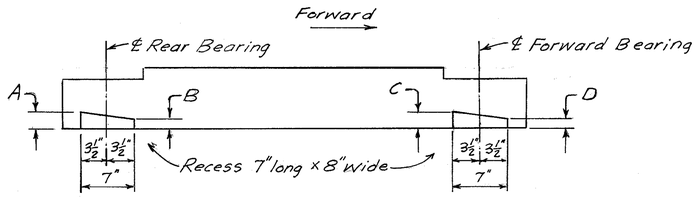
## ESTIMATED QUANTITIES

| ITEM | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPERS. | R. WALL | GEN. | AS BUILT | |
|---|---|---|---|---|---|---|---|---|---|---|
| 202 | Lump | Sum | Structure Removed | | | | | Lump | | |
| 403 | 29 | Cu.Yd. | Asphalt Concrete (AC-20) | | | 29 | | | | |
| 404 | 29 | Cu.Yd. | Asphalt Concrete (AC-20) | | | 29 | | | | |
| 503 | Lump | Sum | Cofferdams, Cribs and Sheeting | | | | | Lump | | |
| 503 | 836 | Cu.Yd. | Unclassified Excavation including Shale | 148 | 176 | | 512 | | | |
| 505 | Lump | Sum | Test Pile | | | | | Lump | | |
| 507 | 670 | Lin.Ft. | Steel Piles HP12X53 | 280 | 390 | | | | | |
| 507 | 180 | Lin.Ft. | Prebored holes, as per plan | | 180 | | | | | |
| 509 | 44,178 | Lb. | Reinforcing Steel | 7,995 | 24,509 | 8,766 | 2,908 | | | |
| 510 | 50 | Each | Dowel holes | 10 | 40 | | | | | |
| 511 | 80 | Cu.Yd. | Class C Concrete, Abutments | 80 | | | | | | |
| 511 | 37 | Cu.Yd. | Class C Concrete, Pier Caps | | 37 | | | | | |
| 511 | 50 | Cu.Yd. | Class C Concrete, Footings | | 32 | | 18 | | | |
| 511 | 203 | Cu.Yd. | Class C Concrete, Piers Above Footings | | 203 | | | | | |
| 511 | 68 | Cu.Yd. | Class C Concrete, Superstructure | | | 68 | | | | |
| 511 | 24 | Cu.Yd. | Class C Concrete, Retaining Wall Above Footing | | | | 24 | | | |
| 512 | 2 | Sq.Yd. | Type B Waterproofing | | | | 2 | | | |
| 512 | 858 | Sq.Yd. | Type D Waterproofing | 15 | | 843 | | | | |
| 515 | 424.50 | Lin.Ft. | Prestressed Concrete Bridge Members (B21-36) | | | 424.50 | | | | |
| 515 | 1702.40 | Lin.Ft. | Prestressed Concrete Bridge Members (B21-48) | | | 1702.40 | | | | |
| 516 | 112 | Lin.Ft. | Elastomeric joint seal, including specials, as per plan | | | | | 112 | | |
| 516 | 25 | Sq.Ft. | 1" Preformed Expansion Joint Filler | | | | | 25 | | |
| 516 | 30 | Sq.Ft. | 3/4" Preformed Expansion Joint Filler | | | | | 30 | | |
| 516 | 40 | Each | 2"X5"X6" Laminated Elastomeric Bearings | 40 | | | | | | |
| 516 | 80 | Each | 1½"X5"X6" Laminated Elastomeric Bearings | | 80 | | | | | |
| 516 | 80 | Each | 3/4"X5"X6" Elastomeric Bearing Pads | | 80 | | | | | |
| 516 | 300 | Each | 1/8"X5"X6" Preformed Bearing Pads (Shims), 711.21 as per plan | | | | | 300 | | |
| 518 | 30 | Cu.Yd. | Porous Backfill | | | | | 30 | | |
| 601 | 846 | Sq.Yd. | Crushed Aggregate Slope Protection | | | | | 846 | | |
| 622 | 10 | Lin.Ft. | Concrete Barrier, Type D Modified as per plan | | | | | 10 | | |

COMPUTED BY: V.K. 11.15.77 CHECKED BY: [illegible] 11.15.77

## BEARING RECESS DIMENSIONS

| Span | Beams | A | B | | C | D |
|---|---|---|---|---|---|---|
| 1 | 1 thru 4 | 5/8" | 1/8" | | 1/2" | 1/8" |
| | 5 thru 7 | 5/8" | 1/8" | | 3/8" | 1/8" |
| | 8 thru 10 | 1/2" | 1/8" | | 3/8" | 1/8" |
| 2 | 1 and 2 | 1/2" | 1/8" | | 3/8" | 1/8" |
| | 3 thru 6 | 1/2" | 1/8" | | 1/4" | 1/8" |
| | 7 thru 10 | 3/8" | 1/8" | | 1/4" | 1/8" |
| 3 | 1 thru 4 | 3/8" | 1/8" | | 0" | 0" |
| | 5 thru 10 | 1/4" | 1/8" | | 0" | 0" |
| 4 | 1 thru 3 | 1/4" | 1/8" | | 1/8" | 1/4" |
| | 4 thru 7 | 0" | 0" | | 1/8" | 1/4" |
| | 8 thru 10 | 0" | 0" | | 1/8" | 3/8" |
| 5 | 1 and 2 | 0" | 0" | | 1/8" | 3/8" |
| | 2 thru 6 | 1/8" | 1/4" | | 1/8" | 3/8" |
| | 7 thru 10 | 1/8" | 1/4" | | 1/8" | 1/2" |




SECTION THRU BEAM ON LONGITUDINAL ℄ BEARINGS

2/11

ERIKSSON ENGINEERING
COLUMBUS OHIO

ESTIMATED QUANTITIES
BRIDGE NO LAK-608-0337
S.R. 608 OVER CHESSIE SYSTEM
STA. 48+94.09 to STA. 51+12.85
LAKE CO.

| Designed | Drawn | Checked | Reviewed | Date | Revised |
|---|---|---|---|---|---|
| V.K. | J.D. | C.E. | [illegible] | 11/14/77 | |