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**BRIDGE NO. CLI-28-16.91 OVER EAST FORK LITTLE MIAMI RIVER**

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**ENGINEERING ASSOCIATES, INC.**  
**CONSULTING ENGINEERS**

1935 EAGLE PASS - WOOSTER, OHIO 44691  
TELEPHONE: (330) 345-6556  
FAX: (330) 345-8077

PROJECT: CLI-28-16.91 PROJ. NO.: 21093 PG.: 1 OF 3  
COMP. BY: TAC DATE: 6/23 CHKD. BY: HK DATE: 6/23  
SUBJECT: CULVERT @ EAST FORK LITTLE MIAMI RIVER  
ESTIMATED QUANTITIES SFN: 1400746

ITEM 202 11203 PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

LUMP SUM

ITEM 503 11100 COFFERDAMS AND EXCAVATION BRACING

LUMP SUM

ITEM 503 21100 UNCLASSIFIED EXCAVATION

LUMP SUM

ITEM 509 26000 GALVANIZED STEEL REINFORCEMENT

CARRIED FROM PLAN SHEET 10/10

7118 LB.

ITEM 510 10000 DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT

1181 EA.

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PROJECT: CLI-28-16.91 PROJ. NO.: 21093 PG.: 2 OF 3  
COMP. BY: TAC DATE: 6/23 CHKD. BY: HK DATE: 6/23  
SUBJECT: CULVERT @ EAST FORK LITTLE MIAMI RIVER  
ESTIMATED QUANTITIES SFN: 1400746

ITEM 511 33413 CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN

DECK:  $(8.1875 \times 1/12) \times 36.1667 \times 28.24 \times 1/27 = 25.810 \text{ C.Y.}$   
 $25.810 \text{ C.Y.}$

26 C.Y.

ITEM 511 33413 CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN, FULL DEPTH REPAIR

(CALCULATED BY CADD)

AREA A: 52.30 S.F.  
AREA B: 6.00 S.F.  
AREA C: 79.00 S.F.  
AREA D: 27.10 S.F.  
AREA E: 32.00 S.F.  
TOTAL = 196.40 S.F.  $\times 1.167 = 229.199 \text{ C.F.}$

$229.20 \times 1/27 = 8.489 \text{ C.Y.}$

8 C.Y.

ITEM 512 10100 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

$(2.115' \times 22.99') \times 2 = 99.225 \text{ S.F.}$

$99.225 \times 1/9 = 11.025 \text{ S.Y.}$

11 S.Y.

ITEM 512 10300 SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

$(28.24' \text{ L} \times 2.0' \text{ W}) \times 3 \times 1/9 = 18.827 \text{ S.Y.}$

19 S.Y.

ITEM 519 11101 PATCHING CONCRETE STRUCTURE, AS PER PLAN

(FROM FIELD)

CULVERT SECTION 1: 9.500 S.F.  
CULVERT SECTION 2: 10.000 S.F.  
CULVERT SECTION 3: 4.500 S.F.  
CULVERT SECTION 4: 4.500 S.F.  
CULVERT SECTION 8: 1.300 S.F.  
CULVERT SECTION 8: 0.500 S.F.  
CULVERT SECTION 9: 6.200 S.F.  
CULVERT SECTION 9: 1.500 S.F.  
TOTAL = 38.000 S.F.

38 S.F.

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PROJECT: CLI-28-16.91 PROJ. NO.: 21093 PG.: 3 OF 3  
COMP. BY: TAC DATE: 6/23 CHKD. BY: HK DATE: 6/23  
SUBJECT: CULVERT @ EAST FORK LITTLE MIAMI RIVER  
ESTIMATED QUANTITIES SFN: 1400746

519 00100 SPECIAL COMPOSITE FIBER WRAP SYSTEM

CULVERT SECTION 1: 30.451 S.F.  
CULVERT SECTION 2: 37.496 S.F.  
CULVERT SECTION 3: 26.248 S.F.  
CULVERT SECTION 4: 18.750 S.F.  
CULVERT SECTION 8: 17.000 S.F.  
CULVERT SECTION 8: 5.625 S.F.  
CULVERT SECTION 9: 9.999 S.F.  
CULVERT SECTION 9: 27.576 S.F.  

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TOTAL= 173.145 S.F.

173 S.F.

ITEM 530 00200 SPECIAL STRUCTURES, MISC.: TEMPORARY SUPPORT

LUMP SUM

ITEM 847 10001 MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (1 1/2")

2 x (3.5'W x 28.24'L) = 197.680 S.F. S.F.  
197.680 x 1/9 = 21.964 S.Y.

22 S.Y.

ITEM 847 30300 WEARING COURSE REMOVED, ASPHALT

36.167'W x 28.24'L = 1021.36 S.F.  
1021.36 x 1/9 = 113.484 S.Y.

113 S.Y.

ITEM 847 30401 EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (1 1/2")

2 x 2.0' W x 28.24' L = 112.96 S.F.  
112.96 x 1/9 = 12.551 S.Y.

13 S.Y.