

COMPUTATION & SUB-SUMMARY

FHWA REGION	STATE	PROJECT	
5	OHIO		

19
171

LAKE COUNTY
LAK-2-0.00

COMPUTED BY: *DA.S. 9/84*
CHECKED BY: *1/6/94*

MAINLINE SHOULDER WIDENING				
	ITEM 203 EXCAVATION NOT INCL. EMBANKMENT CONSTR.	ITEM 301 BITUMINOUS AGGREGATE BASE	ITEM 304 AGGREGATE BASE	ITEM 310 SUBBASE, TYPE II
CITY OF EUCLID STA. 85+50 TO 93+70 STA. 93+70 TO 100+00	(SEE X-SECTIONS) 630 L.F. x 7' x 14" / 12" x 27" = 381 C.Y. TOTAL CITY OF EUCLID = 381 C.Y.	770 L.F. x ((23.75+4.5)/2) x 3" / 12" x 27" = 101 C.Y. 630 L.F. x 4.5' x 3" / 12" x 27" = 53 C.Y. TOTAL CITY OF EUCLID = 154 C.Y.	770 L.F. x ((23.75+4.5)/2) x 5" / 12" x 27" = 167 C.Y. 630 L.F. x 4.5' x 5" / 12" x 27" = 88 C.Y. TOTAL CITY OF EUCLID = 255 C.Y.	770 L.F. x ((26.25+7)/2) x 4.5" / 12" x 27" = 178 C.Y. 630 L.F. x 4.5' x 4.5" / 12" x 27" = 123 C.Y. TOTAL CITY OF EUCLID = 301 C.Y.
CITY OF WICKLIFFE STA. 100+00 TO 193+14.24 STA. 193+14.24 TO 193+65 12 BRIDGE TRANSITIONS	7672.67 L.F. x 7' x 14" / 12" x 27" = 4,641 C.Y. 50.76 L.F. x ((7+5.1)/2) x 14" / 12" x 27" = 27 C.Y. 12 x 200' x ((7+2.5)/2) x 14" / 12" x 27" = 493 C.Y. TOTAL CITY OF WICKLIFFE = 5,161 C.Y.	7672.67 L.F. x 4.5' x 3" / 12" x 27" = 639 C.Y. 50.76 L.F. x ((4.5+3.4)/2) x 3" / 12" x 27" = 4 C.Y. 12 x 200' x ((4.5+0)/2) x 3" / 12" x 27" = 50 C.Y. TOTAL CITY OF WICKLIFFE = 693 C.Y.	7672.67 L.F. x 4.5' x 5" / 12" x 27" = 1066 C.Y. 50.76 L.F. x ((4.5+3.4)/2) x 5" / 12" x 27" = 6 C.Y. 12 x 200' x ((4.5+0)/2) x 5" / 12" x 27" = 83 C.Y. TOTAL CITY OF WICKLIFFE = 1155 C.Y.	7672.67 L.F. x 4.5" / 12" x 27" = 1492 C.Y. 50.76 L.F. x ((7+5.1)/2) x 4.5" / 12" x 27" = 9 C.Y. 12 x 200' x ((7+2.5)/2) x 4.5" / 12" x 27" = 158 C.Y. TOTAL CITY OF WICKLIFFE = 1659 C.Y.
CITY OF WILLOWICK STA. 193+65 TO 193+14.24 193+14.24 TO 217+20 2 BRIDGE TRANSITIONS	149.24 L.F. x ((5.1+2.5)/2) x 14" / 12" x 27" = 49 C.Y. 1840.74 L.F. x 7' x 14" / 12" x 27" = 1,114 C.Y. 2 x 200' x ((7+2.5)/2) x 14" / 12" x 27" = 82 C.Y. TOTAL CITY OF WILLOWICK = 1,245 C.Y.	149.24 L.F. x ((3.4+0)/2) x 3" / 12" x 27" = 5 C.Y. 1840.74 L.F. x 4.5' x 3" / 12" x 27" = 153 C.Y. 2 x 200' x ((4.5+0)/2) x 3" / 12" x 27" = 8 C.Y. TOTAL CITY OF WILLOWICK = 166 C.Y.	149.24 L.F. x ((3.4+0)/2) x 5" / 12" x 27" = 8 C.Y. 1840.74 L.F. x 4.5' x 5" / 12" x 27" = 256 C.Y. 2 x 200' x ((4.5+0)/2) x 5" / 12" x 27" = 14 C.Y. TOTAL CITY OF WILLOWICK = 278 C.Y.	149.24 L.F. x ((5.1+2.5)/2) x 4.5" / 12" x 27" = 16 C.Y. 1840.74 L.F. x 4.5" / 12" x 27" = 358 C.Y. 2 x 200' x ((7+2.5)/2) x 4.5" / 12" x 27" = 26 C.Y. TOTAL CITY OF WILLOWICK = 400 C.Y.
CITY OF EASTLAKE STA. 217+20 TO 308+85 12 BRIDGE TRANSITIONS	7750.12 L.F. x 7' x 14" / 12" x 27" = 4,688 C.Y. 12 x 200' x ((7+2.5)/2) x 14" / 12" x 27" = 493 C.Y. TOTAL CITY OF EASTLAKE = 5,181 C.Y.	7750.12 L.F. x 4.5' x 3" / 12" x 27" = 646 C.Y. 12 x 200' x ((4.5+0)/2) x 3" / 12" x 27" = 50 C.Y. TOTAL CITY OF EASTLAKE = 696 C.Y.	7750.12 L.F. x 4.5' x 5" / 12" x 27" = 1076 C.Y. 12 x 200' x ((4.5+0)/2) x 5" / 12" x 27" = 83 C.Y. TOTAL CITY OF EASTLAKE = 1159 C.Y.	7750.12 L.F. x 4.5" / 12" x 27" = 1507 C.Y. 12 x 200' x ((7+2.5)/2) x 4.5" / 12" x 27" = 158 C.Y. TOTAL CITY OF EASTLAKE = 1665 C.Y.
CITY OF WILLOUGHBY STA. 308+85 TO 214+46.48 STA. 214+46.48 TO 221+27.5 12 BRIDGE TRANSITIONS	8877.73 L.F. x 7' x 14" / 12" x 27" = 5,370 C.Y. (SEE X-SECTIONS) 12 x 200' x ((7+2.5)/2) x 14" / 12" x 27" = 493 C.Y. TOTAL CITY OF WILLOUGHBY = 5,863 C.Y.	8877.73 L.F. x 4.5' x 3" / 12" x 27" = 740 C.Y. 681.02 L.F. x ((4.5+21.3)/2) x 3" / 12" x 27" = 163 C.Y. 12 x 200' x ((4.5+0)/2) x 3" / 12" x 27" = 50 C.Y. TOTAL CITY OF WILLOUGHBY = 953 C.Y.	8877.73 L.F. x 4.5' x 5" / 12" x 27" = 1233 C.Y. 681.02 L.F. x ((4.5+21.3)/2) x 5" / 12" x 27" = 271 C.Y. 12 x 200' x ((4.5+0)/2) x 5" / 12" x 27" = 83 C.Y. TOTAL CITY OF WILLOUGHBY = 1587 C.Y.	8877.73 L.F. x 4.5" / 12" x 27" = 1726 C.Y. 681.02 L.F. x ((7+23.8)/2) x 4.5" / 12" x 27" = 291 C.Y. 12 x 200' x ((7+2.5)/2) x 4.5" / 12" x 27" = 158 C.Y. TOTAL CITY OF WILLOUGHBY = 2175 C.Y.
CITY OF MENTOR STA. 221+27.5 TO 222+16.48	(SEE X-SECTIONS)	88.98 L.F. x ((21.53+23.5)/2) x 3" / 12" x 27" = 37 C.Y. TOTAL CITY OF MENTOR = 37 C.Y.	88.98 L.F. x ((21.53+23.5)/2) x 5" / 12" x 27" = 62 C.Y. TOTAL CITY OF MENTOR = 62 C.Y.	88.98 x ((23.8+26)/2) x 4.5" / 12" x 27" = 62 C.Y. TOTAL CITY OF MENTOR = 62 C.Y.

DECELERATION LANE LENGTHENING (ITEM 203 - EXCAVATION NOT INCL. EMB. CONSTR. INCLUDED ON CROSS-SECTION SHEETS)						
	ITEM 605 - 6" SHALLOW PIPE UNDERDRAIN	ITEM 203 - SUBGRADE COMPACTION	ITEM 301 BITUMINOUS AGGREGATE BASE	ITEM 304 AGGREGATE BASE	ITEM 310 SUBBASE, TYPE II	ITEM 305 - 10" CONCRETE BASE
CITY OF WILLOUGHBY STA. 180 + 51.80R TO 183 + 01.80R 2 TRANSITIONS @ 100' STA. 200 + 17.04L TO 204 + 17.04L 2 TRANSITIONS @ 100'	50 L.F. 200 L.F. 200 L.F. 200 L.F. TOTAL = 650 L.F.	FROM ITEM 301: 62 x 36 ÷ 3 = 744 S.Y. FROM ITEM 305: 646 S.Y. TOTAL = 1390 S.Y.	50 L.F. x 10' x 3" / 12" x 27" = 5 C.Y. 200 L.F. x 10' x 3" / 12" x 27" = 19 C.Y. 200 L.F. x 10' x 3" / 12" x 27" = 19 C.Y. 200 L.F. x 10' x 3" / 12" x 27" = 19 C.Y. TOTAL CITY OF WILLOUGHBY = 62 C.Y.	50 L.F. x 10' x 7" / 12" x 27" = 11 C.Y. 200 L.F. x 10' x 7" / 12" x 27" = 43 C.Y. 200 L.F. x 10' x 7" / 12" x 27" = 43 C.Y. 200 L.F. x 10' x 7" / 12" x 27" = 43 C.Y. TOTAL CITY OF WILLOUGHBY = 140 C.Y.	50 L.F. x (((14' x 6" / 12") + (8' x 4.5" / 12"))) ÷ 27 = 19 C.Y. 200 L.F. x (((4' + 14') / 2 x 6" / 12") + (8' x 4.5" / 12")) ÷ 27 = 56 C.Y. 200 L.F. x (((14' x 6" / 12") + (8' x 4.5" / 12"))) ÷ 27 = 74 C.Y. 200 L.F. x (((4' + 14') / 2 x 6" / 12") + (8' x 4.5" / 12")) ÷ 27 = 56 C.Y. TOTAL CITY OF WILLOUGHBY = 205 C.Y.	50 L.F. x 12" ÷ 9 = 67 S.Y. 200 L.F. x ((2 + 12) / 2) ÷ 9 = 156 S.Y. 200 L.F. x 12" ÷ 9 = 267 S.Y. 200 L.F. x ((2 + 12) / 2) ÷ 9 = 156 S.Y. TOTAL CITY OF WILLOUGHBY = 646 S.Y.

RUMBLE STRIPS - RAMP A-4
CITY OF WICKLIFFE ITEM SPECIAL - RUMBLE STRIPS = 1344 L.F.

ISLAND REPLACEMENT - RAMP B-1
CITY OF WILLOWICK ITEM 202 - 4" CONCRETE MEDIAN REMOVED = 54 C.Y. ITEM 202 - CURB REMOVED = 117 L.F. ITEM 203 - EXCAVATION = 18 C.Y. ITEM 305 - 10" CONCRETE BASE = 54 S.Y.

ITEM 407 - TACK COAT	COVER AGGREGATE
EUCLID = 121 GAL.	4 TONS
WICKLIFFE = 13262 GAL.	464 TONS
WILLOWICK = 3852 GAL.	135 TONS
EASTLAKE = 12807 GAL.	448 TONS
WILLOUGHBY = 13930 GAL.	488 TONS
MENTOR = 145 GAL.	5 TONS