

SUMMARY OF QUANTITIES

PAVEMENT CALCULATIONS

FED. RD. DIVISION	STATE	FEDERAL AID PROJECT	TYPE FUNDS
2	OHIO	F 366(1)	POST WAR

LAKE COUNTY
LAK. - G-(3.60-3.76)
LAK.-174-1.50

6
97

Table	I-5 Pipe Specials - Each							
	6" 4.5" Elbow	12" x 6" Tee	6" Tee	6" Wye	6" Double Wye	12" x 8" Wye	18" x 6" Wye	12" 45° Elbow
Storm Sewers		2				1	1	
Pipe Underdrains								
Pipe Underdrains (Herringbone)	3		1	4	4			
Pipe Underdrains (Longitudinal)	5							
Pipe Underdrains (Intercepting)			4					
TOTALS	8	2	5	4	4	1	1	1

Table	I-4 Lin. Ft. Pipe Outlets For Underdrains	
	6"	12"
Pipe Underdrains		30
Pipe Underdrains (Herringbone)	78	
Pipe Underdrains (Longitudinal)	70	
Pipe Underdrains (Intercepting)	152	
TOTALS	300	30

Widening, Sta. 194+00 to Sta. 195+00	$(2 \times 150 \times \frac{5+2.0}{2} + 9)$	=	41.67	Sq. Yds.
Sta. 195+50 to Sta. 202+00	$(650 \times 24 + 9)$	=	1,733.33	" "
Sta. 206+00 to Sta. 248+26.40	$(4226.40 \times 24 + 9)$	=	11,270.40	" "
Sta. 252+24.60 to Sta. 276+00	$(2375.40 \times 24 + 9)$	=	6,334.40	" "
Widening, Sta. 276+00 to Sta. 277+50	$(2 \times 150 \times \frac{5+2.0}{2} + 9)$	=	41.67	" "
From Storm Sewers Summary		=	11.00	" "
From Extra Area Summary		=	2,421.45	" "
S.R. #174:				
Sta. 82+29.05 to Sta. 86+00	$(370.95 \times 22 + 9)$	=	906.77	" "
Sta. 86+00 to Sta. 88+00	$(200 \times \frac{22+18}{2} + 9)$	=	444.44	" "
TOTAL			23,205.13	Sq. Yds.

Table	E-2	E-12	I-8	I-10	S-24	S-1	S-4
	Excavation for Structures Cu. Yds.	Pipe Removed and Disposed of Lin. Ft.	Standard Catch Basins No. 1-2A Each	Riprap Type A Grouted Sq. Yds.	Removal of Existing Structures Lump Sum	Concrete for Structures Class C Cu. Yds.	Reinforcing Steel Lbs.
Storm Sewers	49.4	832	22	2	20	10.0	209
Structures 20' and Under	149				15	Lump Sum	9.4
Pipe Underdrains			2	1			
Drives		706					
TOTALS	198.4	1538	24	3	35	Lump Sum	19.4

GRANULAR BLANKET MATERIAL (INCLUDED IN E-1 ~ SEE GENERAL NOTES)

Sta. 195+50 to Sta. 196+09.98	$(59.98 \times 46 \times 0.5 + 27)$	=	51.09	Cu. Yds.
Sta. 196+09.98 to Sta. 202+00	$(590.02 \times 37 \times 0.5 + 27)$	=	404.27	" "
Sta. 206+00 to Sta. 208+61.03	$(261.03 \times 37 \times 1.0 + 27)$	=	357.71	" "
Sta. 208+61.03 to Sta. 213+49.27	$(488.24 \times 46 \times 1.0 + 27)$	=	831.82	" "
Sta. 213+49.27 to Sta. 220+00	$(650.73 \times 37 \times 1.0 + 27)$	=	891.74	" "
Sta. 220+00 to Sta. 221+25	$(125.00 \times 37 \times 0.5 + 27)$	=	85.65	" "
Sta. 221+25 to Sta. 225+75	$(450.00 \times 37 \times 1.0 + 27)$	=	616.67	" "
Sta. 225+75 to Sta. 226+25	$(50.00 \times 27 \times 1.0 + 27)$	=	50.00	" "
Sta. 226+25 to Sta. 227+50	$(125.00 \times 27 \times 0.5 + 27)$	=	62.50	" "
Sta. 227+50 to Sta. 228+50	$(100.00 \times 27 \times 1.5 + 27)$	=	150.00	" "
Sta. 228+50 to Sta. 233+00	$(450.00 \times 27 \times 0.5 + 27)$	=	225.00	" "
Sta. 233+00 to Sta. 236+00	$(300.00 \times 27 \times 1.5 + 27)$	=	450.00	" "
Sta. 236+00 to Sta. 237+50	$(150.00 \times 27 \times 0.5 + 27)$	=	75.00	" "
Sta. 237+50 to Sta. 237+75	$(25.00 \times 46 \times 0.5 + 27)$	=	21.30	" "
Sta. 237+75 to Sta. 248+41.40	$(1066.40 \times 46 \times 1.0 + 27)$	=	1816.83	" "
Sta. 252+24.60 to Sta. 256+00	$(375.40 \times 46 \times 0.5 + 27)$	=	319.79	" "
Sta. 256+00 to Sta. 262+00	$(600.00 \times 27 \times 1.5 + 27)$	=	900.00	" "
Sta. 270+25 to Sta. 271+50	$(125.00 \times 37 \times 1.0 + 27)$	=	171.30	" "
Sta. 271+50 to Sta. 275+50	$(400.00 \times 46 \times 1.0 + 27)$	=	681.48	" "
Extra Area Summary:				
6" Depth	$(1651.62 \text{ Sq. Yds.} \times 6)$	=	275.28	" "
12" Depth	$(1583.99 \text{ Sq. Yds.} \times 3)$	=	528.00	" "
S.R. #174:				
Sta. 82+29.05 to Sta. 83+00	$(70.95 \times 5.4 \times 1.0 + 27)$	=	141.90	" "
Sta. 83+00 to Sta. 86+00	$(300.00 \times 35 \times 0.5 + 27)$	=	194.44	" "
Sta. 86+00 to Sta. 88+00	$(200.00 \times 44 \times 0.5 + 27)$	=	162.96	" "
TOTAL			9464.73	Cu. Yds. +15% = 10,884.43 Cu. Yds.

Table	Excavation	Embankment	Embankment +15%
	Cu. Yds.	Cu. Yds.	Cu. Yds.
Drives			
Addition	584	2563	
Deduction	312	18	
Net Addition	272	2548	2930
Earthwork	304,751	258,153	296,884
TOTALS	3,05,003	266,701	299,814

Sheet No.	Item L-9		Item L-12	Item L-14
	Seeding Sq. Yds.	Commercial Fertilizer Tons	Lonicera Halliana Each	Gleditsia triacanthos inermis Each
20	18,707	2,525	487	5
21	45,407	6,130	7,184	
22	64,948	8,768	9,779	
23	18,799	2,538	404	11
TOTALS	147,861	19,961	17,854	16

Excavation quantity includes 10,885 cu. yds. of granular material to be reserved and used as per Earthwork note of General Notes.

EARTHWORK CALCULATION

EMBANKMENT	
FROM RECAP TABLE	= 299,814 Cu. Yds.
RESERVED FOR SUBBASE MATERIAL	= 10,885 " "
TOTAL EMBANKMENT	= 310,699 Cu. Yds.
EXCAVATION	
FROM RECAP TABLE	= 305,003 Cu. Yds.
EXCAVATION FOR STRUCTURES	= 198.4
PAVEMENT REMOVAL $9562 \text{ Sq. Yds.} \times 9' \div 36$	= 2,390.5
TOTAL EXCAVATION	307,591.9 Cu. Yds.
NET EARTHWORK (BORROW)	3,107 Cu. Yds.

U.S.R. #6 WEST OF S.R. #174	$900' \times 16' \times 0.5' \div 27 =$	267	Cu. Yds.
S.R. #174	$900' \times 10' \times 0.5' \div 27 =$	167	Cu. Yds.
TOTAL		434	Cu. Yds.

$434 \times 40 \div 2000 =$	8.68	Tons
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I-7 9" REINFORCED CONCRETE APPROACH SLAB

Sta. 248+26.40 to Sta. 248+41.40	$(15 \times 24 \div 9)$	=	40.00	Sq. Yds.
T-35 ASPHALTIC CONCRETE SURFACE COURSE TYPE 'A' OR 'C'				
40.00 Sq. Yds. x 2.5 ÷ 36		=	2.78	Cu. Yds.

I-17 SIDE APPROACHES, MAIL BOX TURNOUTS AND BERM MATERIAL

$2(\frac{1}{2} \times 7 \times 25) + (15 \times 7) = 280 \text{ Sq. Ft.}$	$280 \times 0.5 + 27 = 5.19 \text{ Cu. Yds. per Mail Box Turnout}$		
15 Turnouts x 5.19 Cu. Yds. per Turnout		=	78 Cu. Yds.
From Drives Table		=	664
	$(78 + 664) \times 15\%$	=	853

E-8 SEALING ONLY

Sta. 194+00 to Sta. 195+50	(150×2)	=	300	Lin. Ft.
Sta. 276+00 to Sta. 277+50	(150×2)	=	300	" "
Extra Area Summary		=	78	" "

TOTAL 678 Lin. Ft.

E-11 WATER

258,886 Cu. Yds. Embankment x 5 Gals. per Cu. Yd.	=	1,294.4	M-Gals.
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