

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	



LAKE COUNTY
LAK. 44-8.79

I-22 SUBBASE (CONTINUED)

FG-388(12)

SUBBASE UNDER PAVEMENT					
S.R. 44 NORTHBOUND & SOUTHBOUND	STA. 305 + 47.27	TO STA. 309 + 89.33	= 2358	x 6 + 36 =	393 CU. YDS.
RAMP E	STA. 33 + 00	TO STA. 46 + 79.63	= 3679	x 6 + 36 =	613 CU. YDS.
RAMP G	STA. 0 + 18.33	TO STA. 14 + 00	= 3684	x 6 + 36 =	614 CU. YDS.

SUB-TOTAL I-22 SUBBASE UNDER PAVEMENT FG-388(12) = 1620 CU. YDS.

SUBBASE UNDER APPROACH SLABS

LAK-44-0556R (NORTHBOUND)			= 134	x 6 + 36 =	22 CU. YDS.
LAK-44-0556L (SOUTHBOUND)			= 134	x 6 + 36 =	22 CU. YDS.

SUB-TOTAL I-22 SUBBASE UNDER APPROACH SLABS FG-388(12) = 44 CU. YDS.

SUBBASE UNDER PAVED BERMS*

S.R. 44 NORTHBOUND	STA. 306 + 15	TO STA. 307 + 00	= 85	x 4 + 27 =	13 CU. YDS.
" " "	STA. 307 + 00	TO STA. 303 + 13	= 113	x 4.5 + 27 =	19 CU. YDS.
" " "	STA. 308 + 13	TO STA. 310 + 13	= 200	x 5 + 27 =	37 CU. YDS.
" " "	STA. 305 + 71	TO STA. 310 + 13	= 442	x 1.55 + 27 =	25 CU. YDS.
S.R. 44 SOUTHBOUND	STA. 304 + 98	TO STA. 310 + 15	= 517	x 4.23 + 27 =	81 CU. YDS.
" " "	STA. 305 + 32	TO STA. 310 + 14	= 482	x 2 + 27 =	36 CU. YDS.
S.R. 44 NORTHBOUND & SOUTHBOUND	STA. 312 + 38.83	TO STA. 312 + 45	= 6.17	x 12.78 + 27 =	3 CU. YDS.
RAMP E	STA. 33 + 00	TO STA. 41 + 05.01	= 805.01	x 7 + 27 =	209 CU. YDS.
RAMP G	STA. 41 + 05.01	TO STA. 46 + 97.96	= 592.95	x 6.55 + 27 =	144 CU. YDS.
RAMP G	STA. 0 + 00	TO STA. 14 + 00	= 1400	x 7 + 27 =	363 CU. YDS.

SUB-TOTAL I-22 SUBBASE UNDER PAVED BERMS FG-388(12) = 930 CU. YDS.

SUBBASE UNDER PAVEMENT			= 1620		CU. YDS.
SUBBASE UNDER APPROACH SLABS			= 44		CU. YDS.
SUBBASE UNDER PAVED BERMS			= 930		CU. YDS.

TOTAL I-22 SUBBASE = 2594 CU. YDS.

F-388(12)

SUBBASE UNDER PAVEMENT					
RAMP E	STA. 29 + 00	TO STA. 33 + 00	= 1067	x 6 + 36 =	178 CU. YDS.
RAMP G	STA. 14 + 00	TO STA. 18 + 00	= 1067	x 6 + 36 =	178 CU. YDS.

SUB-TOTAL I-22 SUBBASE UNDER PAVEMENT F-388(12) = 356 CU. YDS.

SUBBASE UNDER PAVED BERMS

RAMP E	STA. 29 + 00	TO STA. 33 + 00	= 400	x 7 + 27 =	104 CU. YDS.
RAMP G	STA. 14 + 00	TO STA. 18 + 00	= 400	x 7 + 27 =	104 CU. YDS.

SUB-TOTAL I-22 SUBBASE UNDER PAVED BERMS F-388(12) = 208 CU. YDS.

SUBBASE UNDER PAVEMENT			= 356		CU. YDS.
SUBBASE UNDER PAVED BERMS			= 208		CU. YDS.

TOTAL I-22 SUBBASE = 564 CU. YDS.

E-8 REMOVAL & DISPOSAL OF EXISTING PAVEMENT

U-388(12) MUNICIPAL

MENTOR AVENUE	STA. 8 + 01.68	TO STA. 11 + 50	= 348.32	x 36 + 9 =	1393 SQ. YDS.
JACKSON STREET	STA. 7 + 71.34	TO STA. 12 + 01.16	= 429.82	x 27 + 9 =	1289 SQ. YDS.

TOTAL E-8 REMOVAL & DISPOSAL OF EXISTING PAVEMENT U-388(12) = 2682 SQ. YDS.

E-8 REMOVAL & DISPOSAL OF EXIST. CONC. GUTTER CURB

U-388(12) MUNICIPAL

MENTOR AVENUE	STA. 6 + 21.68	TO STA. 13 + 30	= 708.32	x 2 =	1417 LIN. FT.
					DEDUCT FOR INTERSECTION - 57

TOTAL E-8 REMOVAL & DISPOSAL OF EXIST. CONC. GUTTER CURB U-388(12) = 1360 LIN. FT.

*QUANTITY = LENGTH X CONSTANT + 27

(CONSTANT IS VARIABLE AND DEPENDS ON WHETHER THE SECTION IS NORMAL OR SUPERELEVATED. NORMAL SECTIONS ARE TAKEN TO THE MIDDLE OF THE TRANSITIONS AND SUPERELEVATED SECTIONS FROM THE MIDDLE OF THE TRANSITIONS.)

B-112 POROUS BASE COURSE*

U-388(12) RURAL

S.R. 44 NORTHBOUND	STA. 217 + 00	TO STA. 225 + 73	= 873	x 3.70 + 27 =	120 CU. YDS.
" " "	STA. 227 + 90	TO STA. 237 + 10	= 920	x 3.17 + 27 =	108 CU. YDS.
" " "	STA. 237 + 10	TO STA. 237 + 90	= 80	x 3.44 + 27 =	10 CU. YDS.
" " "	STA. 237 + 90	TO STA. 255 + 79.39	= 1789.39	x 3.70 + 27 =	245 CU. YDS.
" " "	STA. 255 + 79.39	TO STA. 263 + 00	= 720.61	x 4.58 + 27 =	122 CU. YDS.
" " "	STA. 217 + 00	TO STA. 253 + 79.39	= 3879.39	x 1.79 + 27 =	257 CU. YDS.
" " "	STA. 255 + 79.39	TO STA. 253 + 00	= 720.61	x 2 + 27 =	53 CU. YDS.
S.R. 44 SOUTHBOUND	STA. 217 + 00	TO STA. 253 + 78.95	= 386.95	x 3.70 + 27 =	144 CU. YDS.
" " "	STA. 230 + 48.76	TO STA. 233 + 28.95	= 280.19	x 3.17 + 27 =	33 CU. YDS.
" " "	STA. 233 + 28.95	TO STA. 234 + 28.95	= 100	x 3.44 + 27 =	13 CU. YDS.
" " "	STA. 234 + 28.95	TO STA. 255 + 79.39	= 2150.44	x 3.70 + 27 =	295 CU. YDS.
" " "	STA. 255 + 79.39	TO STA. 263 + 00	= 720.61	x 5 + 27 =	133 CU. YDS.
" " "	STA. 217 + 00	TO STA. 255 + 79.39	= 3879.39	x 1.79 + 27 =	257 CU. YDS.
" " "	STA. 255 + 79.39	TO STA. 263 + 00	= 720.61	x 2 + 27 =	53 CU. YDS.
RAMP A	STA. 0 + 63.65	TO STA. 8 + 22.70	= 759.05	x 1.12 + 27 =	32 CU. YDS.
RAMP B	STA. 0 + 70.90	TO STA. 5 + 90.91	= 520.01	x 1.12 + 27 =	22 CU. YDS.
RAMP B	STA. 5 + 90.91	TO STA. 7 + 25	= 134.09	x 1.48 + 27 =	7 CU. YDS.

TOTAL B-112 POROUS BASE COURSE U-388(12) RURAL = 1874 CU. YDS.

U-388(12) MUNICIPAL

S.R. 44 NORTHBOUND	STA. 281 + 50	TO STA. 294 + 30	= 1280	x 3.70 + 27 =	175 CU. YDS.
" " "	STA. 281 + 50	TO STA. 296 + 00	= 1450	x 1.79 + 27 =	96 CU. YDS.
S.R. 44 SOUTHBOUND	STA. 281 + 50	TO STA. 293 + 80.64	= 1230.64	x 3.70 + 27 =	160 CU. YDS.
" " "	STA. 281 + 50	TO STA. 296 + 00	= 1450	x 1.79 + 27 =	96 CU. YDS.
RAMP NO. 1	STA. 5 + 18.56	TO STA. 8 + 27.46	= 333.90	x 1.12 + 27 =	14 CU. YDS.
RAMP NO. 1	STA. 11 + 21.06	TO STA. 11 + 21.21	= 268.75	x 1.48 + 27 =	15 CU. YDS.
RAMP NO. 1	STA. 11 + 21.21	TO STA. 14 + 17.77	= 296.56	x 1.12 + 27 =	12 CU. YDS.
RAMP NO. 2	STA. 3 + 75	TO STA. 7 + 06.70	= 331.70	x 1.12 + 27 =	14 CU. YDS.
RAMP NO. 2	STA. 7 + 06.70	TO STA. 9 + 70.79	= 264.09	x 1.48 + 27 =	14 CU. YDS.
RAMP NO. 2	STA. 9 + 70.79	TO STA. 13 + 15.34	= 344.55	x 1.12 + 27 =	14 CU. YDS.

TOTAL B-112 POROUS BASE COURSE U-388(12) MUNICIPAL = 619 CU. YDS.

UG-388(12) RURAL

S.R. 44 NORTHBOUND	STA. 263 + 00	TO STA. 271 + 56.73	= 856.73	x 4.58 + 27 =	145 CU. YDS.
" " "	STA. 271 + 56.73	TO STA. 271 + 97	= 40.27	x 3.70 + 27 =	6 CU. YDS.
" " "	STA. 263 + 00	TO STA. 271 + 56.73	= 856.73	x 2 + 27 =	63 CU. YDS.
" " "	STA. 271 + 56.73	TO STA. 272 + 12	= 55.27	x 1.79 + 27 =	4 CU. YDS.
S.R. 44 SOUTHBOUND	STA. 263 + 00	TO STA. 271 + 56.73	= 856.73	x 5 + 27 =	159 CU. YDS.
" " "	STA. 271 + 56.73	TO STA. 272 + 48	= 91.27	x 3.70 + 27 =	13 CU. YDS.
" " "	STA. 263 + 00	TO STA. 271 + 56.73	= 856.73	x 2 + 27 =	63 CU. YDS.
" " "	STA. 271 + 56.73	TO STA. 272 + 32	= 75.27	x 1.79 + 27 =	5 CU. YDS.

TOTAL B-112 POROUS BASE COURSE UG-388(12) RURAL = 458 CU. YDS.

UG-388(12) MUNICIPAL

S.R. 44 NORTHBOUND	STA. 271 + 97	TO STA. 281 + 50	= 953	x 3.70 + 27 =	130 CU. YDS.
" " "	STA. 297 + 00	TO STA. 303 + 14.85	= 300.15	x 3.17 + 27 =	72 CU. YDS.
" " "	STA. 303 + 14.85	TO STA. 306 + 15	= 938	x 1.79 + 27 =	20 CU. YDS.
" " "	STA. 272 + 12	TO STA. 281 + 50	= 714.85	x 1.79 + 27 =	62 CU. YDS.
" " "	STA. 296 + 00	TO STA. 303 + 14.85	= 714.85	x 1.79 + 27 =	47 CU. YDS.
" " "	STA. 303 + 14.85	TO STA. 305 + 71	= 256.15	x 2 + 27 =	19 CU. YDS.
S.R. 44 SOUTHBOUND	STA. 272 + 48	TO STA. 281 + 50	= 902	x 3.70 + 27 =	124 CU. YDS.
" " "	STA. 299 + 00	TO STA. 301 + 81	= 281	x 3.17 + 27 =	33 CU. YDS.
" " "	STA. 301 + 81	TO STA. 302 + 81	= 100	x 3.44 + 27 =	13 CU. YDS.
" " "	STA. 302 + 81	TO STA. 303 + 14.85	= 33.85	x 3.70 + 27 =	5 CU. YDS.
" " "	STA. 303 + 14.85	TO STA. 304 + 98	= 183.15	x 4.51 + 27 =	31 CU. YDS.
" " "	STA. 272 + 32	TO STA. 281 + 50	= 918	x 1.79 + 27 =	61 CU. YDS.
" " "	STA. 296 + 00	TO STA. 303 + 14.85	= 714.85	x 1.79 + 27 =	47 CU. YDS.
" " "	STA. 303 + 14.85	TO STA. 305 + 32	= 217.15	x 1.94 + 27 =	16 CU. YDS.

TOTAL B-112 POROUS BASE COURSE UG-388(12) MUNICIPAL = 680 CU. YDS.

FG-388(12)

S.R. 44 NORTHBOUND	STA. 306 + 15	TO STA. 307 + 00	= 85	x 1.79 + 27 =	6 CU. YDS.
" " "	STA. 307 + 00	TO STA. 308 + 13	= 113	x 1.98 + 27 =	8 CU. YDS.
" " "	STA. 308 + 13	TO STA. 310 + 13	= 200	x 4.67 + 27 =	35 CU. YDS.
" " "	STA. 305 + 71	TO STA. 310 + 13	= 442	x 2 + 27 =	33 CU. YDS.
S.R. 44 SOUTHBOUND	STA. 304 + 98	TO STA. 310 + 15	= 517	x 4.51 + 27 =	86 CU. YDS.
" " "	STA. 305 + 32	TO STA. 310 + 14	= 482	x 1.94 + 27 =	35 CU. YDS.
S.R. 44 NORTHBOUND & SOUTHBOUND	STA. 312 + 38.83	TO STA. 312 + 45	= 6.17	x 13.12 + 27 =	3 CU. YDS.
RAMP E	STA. 33 + 00	TO STA. 41 + 05.01	= 805.01	x 5.49 + 27 =	164 CU. YDS.
RAMP G	STA. 41 + 05.01	TO STA. 46 + 97.96	= 592.95	x 6.67 + 27 =	146 CU. YDS.
RAMP G	STA. 0 + 00	TO STA. 14 + 00	= 1400	x 5.49 + 27 =	285 CU. YDS.

TOTAL B-112 POROUS BASE COURSE FG-388(12) = 801 CU. YDS.

F-388(12)

RAMP E	STA. 29 + 00	TO STA. 33 + 00	= 400	x 5.49 + 27 =	81 CU. YDS.
RAMP G	STA. 14 + 00	TO STA. 18 + 00	= 400	x 5.49 + 27 =	81 CU. YDS.

TOTAL B-112 POROUS BASE COURSE F-388(12) = 162 CU. YDS.