FED. RD DIVISION	STATE	PROJECT	
2	OHIO	I-1102 (6)	

22
458

CUYAHOGA & LAKE COUNTIES
CUY-I-15.91
LAK-I-0.00

PAVEMENT, BASE & SUBBASE CALCULATIONS

See Sheet No.	Station Locations, Calculations, Etc.	E-1 Compacted Subgrade Sq. Yds.	B-21B 8" Waterproofed Aggregate Base Course Sq. Yds.	B-35 Asph. Conc. Leveling Course (70-85) 1½"	B-35 Asphaltic Conc. Base Course (70-85) 2¾" Sq. Yds.	B-19 Aggregate Base Course Sq. Yds. 5"	B-19 6"	B-19 8"	T-30 Bituminous Prime Coat Sq. Yds.	T-31 Bituminous Surf. Treat. Bit. Mat'l. Sq. Yds.	T-31 Bituminous Surf. Treat. No. 6 Aggr. Sq. Yds.	T-32 Road Mix Bituminous Material Sq. Yds.	T-32 Seal Coat Bituminous Material Sq. Yds.	T-32 No. 9A Aggr. for Road Mix Sq. Yds.	T-32 No. 6 or 9 Aggregate for Choke Sq. Yds.	T-32 No. 6 Aggr. for Seal Coat Sq. Yds.	T-35 Asph. Conc. Surface Course (70-85) Sq. Yds. 1¼"	1½"	T-71 9" Reinf. Portland Cem. Conc. Pav't. Sq. Yds.	T-71 10" Reinf. Portland Cem. Conc. Pav't. Sq. Yds.	I-7 Reinf. Conc. Approach Slabs (T-13") Sq. Yds.	I-7 Reinf. Conc. Appr. Slabs as per Plan Sq. Yds.	I-18 5" Stab. Cr. Aggr. Shldrs. & Approaches Sq. Yds.	I-22 Subbase Grading for B as per Plan Cu. Yds.
216	Lt. Ramp "B" Sta. 61+68.30 To Sta. 81+22 = 153.05' Avg. L. X 9.1' Avg. W. X 0.52' Avg. D. X 1/27																						26.82
8,30,219	Ramp "C" [illegible] = 2109.23 S.Y.	2,293.23																	184.00	2109.23			
	2293.23 S.Y. @ 0.5' D. = 2293.23 X 1/6																						382.21
219	Sta. 111+45 To Sta. 151+94.55 = 452.63' Avg. L. X 16' W. X 1/9																		804.68				
	NOTE: Subgrade in Shale from Sta. 131+00 To Sta. 151+94.55 - 452.63 Less 297.45 - 155.18 X 16' W. X 1/9	275.88																					
	452.63' Avg. L. X 16' W. X 0.5' D. X 1/27																						134.11
219	Sta. 151+94.55 To Sta. 191+29.24 = 334.69' X 20' Avg. W. X 1/9																		743.76				
	NOTE: Subgrade in Shale from Sta. 151+94.55 To Sta. 161+50 - 334.69 Less 55.45' 279.24 X 16' Avg. W. X 1/9	518.15																					
	334.69' X 20' Avg. W. X 0.5' D. X 1/27																						123.96
219	Sta. 191+29.24 To Sta. 211+02.5 = 168.78' Avg. L. X 24' W. X 1/9	450.08																	450.08				
	168.78' Avg. L. X 24' W. X 0.5' D. X 1/27																						75.01
219	Sta. 211+02.5 To Sta. 211+41.54 Intersection (P) 157.30 S.Y. Pavement	157.30																	157.30				
	" 26.01 S.Y. Shoulder	26.01	26.01							26.01	26.01												
	" 27.10 S.Y. Shoulder Base																					27.10	
	" 201.10 S.Y. @ 0.5' D. = 201.10 X 1/6																						33.52
219	Rt. Ramp "C" Sta. 111+45 To Sta. 131+00 = 154.63' Avg. L. X 8.6' Avg. W. X 1/9	147.76	147.76							147.76	147.76												
	154.63' Avg. L. X 9.1' Avg. W. X 1/9																					156.35	
	154.63' Avg. L. X 9.1' Avg. W. X 0.52' Avg. D. X 1/27																						27.10
219	Sta. 131+00 To Sta. 211+02.5 = 802.78' Avg. L. X 8' W. X 1/9 (NOTE: Subgrade in Shale from	403.74	713.58							713.58	713.58												
	Sta. 131+00 To Sta. 161+50 802.78 Less 348.57 + 454.21 X 8' W. X 1/9) 802.78' Avg. L. X 8.5' W. X 1/9																					758.18	
	802.78' Avg. L. X 8.5' W. X 0.52' Avg. D. X 1/27																						131.42
219	Lt. Ramp "C" Sta. 101+47.48 To Sta. 111+45 = 97.76' Avg. L. X 3' W. X 1/9	32.58	32.58							32.58	32.58											32.58	
	97.76' Avg. L. X 3' W. X 0.54' Avg. D. X 1/27																						5.86
219	Sta. 111+45 To Sta. 211+02.50 = 957.68' Avg. L. X 3' W. X 1/9 (NOTE: Subgrade in Shale from	202.50	319.23							319.23	319.23												
	Sta. 131+00 To Sta. 161+50 957.68 Less 350.18 + 407.82 X 3' W. X 1/9) 957.68' Avg. L. X 3.5' W. X 1/9																					372.43	
	957.68' Avg. L. X 3.5' W. X 0.57' D. X 1/27																						70.76
8,222	Ramp "D" Intersection - Sta. 1148.80 To Sta. 1189.70 (P) 122.31 S.Y. Pavement	122.31																	122.31				
	" 26.45 S.Y. Shoulder	26.45	26.45							26.45	26.45												
	" 27.23 S.Y. Shoulder Base																					27.23	
	" 164.54 S.Y. @ 0.5' D. = 164.54 X 1/6																						27.42
222	Sta. 1189.70 To Sta. 91+62 = 775.12' Avg. L. X 16' W. X 1/9	1,377.99																	1,377.99				
	775.12' Avg. L. X 16' W. X 0.5' D. X 1/27																						229.67
222	Sta. 91+62 To Sta. 111+61.99 = 200.36' Avg. L. X 17' Avg. W. X 1/9	379.59																	379.59				
	200.36' Avg. L. X 18' Avg. W. X 0.5' D. X 1/27																						66.99
222,32	Sta. 111+61.99 To Sta. 141+61.99 = 300.18' Avg. L. X 15' Avg. W. X 1/9	500.30																	500.30				
	300.18' Avg. L. X 16' Avg. W. X 0.5' D. X 1/27																						88.94
32,33	" Sta. 341+61.99 To Sta. 471+65.99 (P) 1672.23 S.Y.	1,672.23																		1,672.23			
	" 1672.23 S.Y. @ 0.5' D. = 1672.23 X 1/6																						278.71
222	Rt. Ramp "D" Sta. 1189.70 To Sta. 91+11.99 = 721.12' Avg. L. X 8' W. X 1/9	641.00	641.00							641.00	641.00												
	721.12' Avg. L. X 8.5' W. X 1/9																					681.06	
	721.12' Avg. L. X 8.5' W. X 0.52' Avg. D. X 1/27																						118.05
222	Sta. 91+11.99 To Sta. 111+61.99 = 249.22' Avg. L. X 9' Avg. W. X 1/9	249.22	249.22							249.22	249.22												
	249.22' Avg. L. X 9.5' Avg. W. X 1/9																					263.07	
	249.22' Avg. L. X 9.5' Avg. W. X 0.52' Avg. D. X 1/27																						45.60
222,32	Sta. 111+61.99 To Sta. 141+61.99 = 299.88' Avg. L. X 10' W. X 1/9	333.20	333.20							333.20	333.20												
	299.88' Avg. L. X 10.5' W. X 1/9																					349.86	
	299.88' Avg. L. X 10.5' W. X 0.52' Avg. D. X 1/27																						60.64
222	Lt. Ramp "D" Sta. 1189.70 To Sta. 81+13 = 626.17' Avg. L. X 3' W. X 1/9	208.72	208.72							208.72	208.72												
	626.17' Avg. L. X 3.5' W. X 1/9																					243.51	
	626.17' Avg. L. X 3.5' W. X 0.57' Avg. D. X 1/27																						46.27
222	Sta. 81+13 To Sta. 91+11.99 = 101.26' Avg. L. X 3' W. X 1/9	33.75	33.75							33.75	33.75											33.75	
	101.26' Avg. L. X 4' W. X 0.54' Avg. D. X 1/27																						8.10
222	Sta. 91+11.99 To Sta. 91+62 = 51.14' Avg. L. X 2.5' Avg. W. X 1/9	14.21	14.21							14.21	14.21											14.21	
	51.14' Avg. L. X 3.5' Avg. W. X 0.54' Avg. D. X 1/27																						3.58
222,32	Extra Area Rt. & Sta. 301+05 To Sta. 341+61.99 (P) 216.86 S.Y. Shoulder & Base	216.86	216.86							216.86	216.86											216.86	
	" 216.86 S.Y. @ 0.5' D. = 216.86 X 1/6																						36.14
8,237	Typical Section "F" 562.82 L.F. X 20' W. X 1/9	1,250.71		1250.71													1251						
	562.82 L.F. X 21' W. X 1/9						1313.25	1313.25															
	562.82 L.F. X 22' W. X 0.417 X 1/27																						91.08
	2 Bridge Approach Slabs on Highland Road (P) 89.5 S.Y.	179.00																			179.00		
	" " " " " " " " " 89.5 S.Y. @ 0.5' Avg. D. = 179.0 X 1/6																						29.83
8,240,241	Typical Section "G" 346.28 L.F. "H" = 945.54 L.F. - Total = 1291.82 L.F. X 18' W. X 1/9																2584						
	1291.82 L.F. X 19' W. X 1/9					2727.18		2727.18															
	1291.82 L.F. X 20' W. X 0.33' D. X 1/27																						315.78
	2 Bridge Approach Slabs on White Road (P) 74.6 S.Y.	149.20																			149.20		
	" " " " " " " " " 74.6 S.Y. @ 0.5' Avg. D. = 149.20 X 1/6																						24.87
	Sub Totals:	11,861.97	2,962.57	1250.71		2727.18	1313.25	4040.43	2,962.57		2,962.57						1251	2584	4720.01	3781.40	328.20	3,176.19	2582.44

NOTE: (P) Denotes Area Obtained By Planimeter.

MICHAEL BAKER, JR, CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

STATE HIGHWAY NO. I
C-41
PAVEMENT, BASE & SUBBASE CALCULATIONS

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
B.P.	E.P.C.	K.L.G.	R.E.F.		