E:\ODOT\20-00270-010 VAR-District 12 Culvert Replacements PID 108471\108471\400-Engineering\Roadway\EngData\108471_Pavement Calcs.xlsx

Quantities calculated for each separate culvert site for use in funding splits in the General Summary.

PID 108471
EDG Project No. 20-00270-010
Pavement Quantity Calculations (Office Calcs) - Tracings

Calc by: RMS Stage 1
Check by: RSW Stage 1
Update by: RMS 6/3/22 Stage 2
Update by: SAC 9/14/2022 Stage 3
Update by: SAC 5/12/2023 Tracings

											Number on Typical Sections =>	*N/A*	*N/A*	*5*		*3*			*4*	*2*	*1*		*7 (14.99 only)*
											Ext. =>	*23000*	*32000*	*10000*		*56000*			*20000*	*10000*	*70101*	*10000*	*26000*
												202		*204*		*301*			*304*	*407*	*441*	*609*	*609*
STATION		SIDE	*LENGTH L*	*EXISTING AVERAGE PAVEMENT WIDTH C (CADD)*	*PROPOSED AVERAGE PAVEMENT WIDTH W*	*EXISTING PAVEMENT AREA AC = L x C*	*PROPOSED PAVEMENT SURFACE AREA AS = L x W*	*PROPOSED PAVEMENT AREA STEP 1 AS1 = AP + (L x 8 / 12)*	*PROPOSED PAVEMENT AREA STEP 2 AS2 = AS1 + (L x 12 / 12)*	*PROPOSED PAVEMENT AREA STEP 3 AS3 = AS2 + (L x 12 / 12)*		*PAVEMENT REMOVED*	*CURB REMOVED*	*SUBGRADE COMPACTION*	*7" ASPHALT CONCRETE BASE, PG64-22, (449)*	*8" ASPHALT CONCRETE BASE, PG64-22, (449)*	*9" ASPHALT CONCRETE BASE, PG64-22, (449)*	*6" AGGREGATE BASE*	*TACK COAT (NEW ASPHALT) (AVE. RATE = 0.055 GAL/SY)*	*3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG70-22M, AS PER PLAN,*	*ASPHALT CONCRETE CURB, TYPE 1*	*CURB, TYPE 6*
								(1)	(1)	(1)		*AC / 9*	*L*	*AS3 / 9*	*(AS1x3.5)+(AS2x3.5) / 12 x 27*	*(AS1x4)+(AS2x4) / 12 x 27*	*(AS1x4.5)+(AS2x4.5) / 12 x 27*	*AS3 x 6 / 12 x 27*	*(6) 3 x (AS1 x 0.055) / 9*	*AS1 x 3 / 12 x 27*	*L*	*L*
TO	FROM		FT	FT	FT	SF	SF	SF	SF	SF		SY	FT	*SY*	*CY*	*CY*	*CY*	*CY*	*GAL*	*CY*	*FT*	*FT*
GEA-86-0.38																						
19+39.00	*19+69.00*	*LT/RT*	*30.00*	*24.63*	*24.86*	*738.9*	*745.8*	*765.80*	*795.80*	*825.80*		*82.10*		*91.76*	*16.87*			*15.29*	*14.04*	*6.91*		
GEA-86-0.38 SUBTOTALS												*82*		*92*	*17*			*15*	*14*	*7*		
GEA-87-0.41																						
21+06.00	*21+46.00*	*LT/RT*	*40.00*	*29.32*	*29.85*	*1172.8*	*1194.0*	*1220.67*	*1260.67*	*1300.67*		*130.31*		*144.52*		*30.63*		*24.09*	*22.38*	*11.06*		
GEA-87-0.41 SUBTOTALS												*130*		*145*		*31*		*24*	*22*	*11*		
GEA-422-14.29																						
744+60.00	*745+02.00*	*LT/RT*	*42.00*	*33.90*	*33.82*	*1423.8*	*1420.4*	*1448.44*	*1490.44*	*1532.44*		*158.20*		*170.27*			*40.82*	*28.38*	*26.55*	*13.15*		
GEA-422-14.29 SUBTOTALS												*158*		*170*			*41*	*28*	*27*	*13*		
GEA-422-14.99														*AS3+(Lx6/12)*			*AS2 x 9*	*[AS3+(Lx6/12)]x6*				
(2)	*(2)*		*(3)*			*(CADD)*	*(CADD)*	*(4)*	*(4)*	*(4)*			*(5)*	*9*			*12 x 27*	*12 x 27*				*(5)*
781+81.56	*781+93.08*	*LT/RT*	*11.52*			*978.47*	*979.19*	*983.03*	*988.79*	*1004.15*		*108.72*	*24.15*	*112.21*			*27.47*	*18.70*	*18.02*	*9.07*		*24.15*
781+93.08	*782+14.29*	*LT*	*21.21*			*643.99*	*645.47*	*645.47*	*645.47*	*645.47*		*71.55*	*26.41*	*72.90*			*17.93*	*12.15*	*11.83*	*5.98*		*26.41*
GEA-422-14.99 SUBTOTALS												*180*	*51*	*185*			*45*	*31*	*30*	*15*		*51*
GEA-700-1.72																						
89+88.00	*90+28.00*	*LT/RT*	*40.00*	*25.28*	*25.29*	*1011.2*	*1011.6*	*1038.27*	*1078.27*	*1118.27*		*112.36*		*124.25*		*26.13*		*20.71*	*19.03*	*9.37*		
GEA-700-1.72 SUBTOTALS												*112*		*124*		*26*		*21*	*19*	*9*		
GEA-700-7.61																						
400+78.00	*401+18.00*	*LT/RT*	*40.00*	*23.09*	*23.10*	*923.6*	*924.0*	*950.67*	*990.67*	*1030.67*		*102.62*		*114.52*		*23.97*		*19.09*	*17.43*	*8.56*		
GEA-700-7.61 SUBTOTALS												*103*		*115*		*24*		*19*	*17*	*9*		
LAKE-84-27.10				*(CADD)*	*(CADD)*																	
100+03.00	*100+75.00*	*LT/RT*	*72.00*	*36.2*	*36.18*	*2606.4*	*2605.0*	*2652.96*	*2724.96*	*2796.96*		*289.60*		*310.77*		*66.39*		*51.80*	*48.64*	*24.12*		
													(5)									
100+03.00	*101+22.00*	*LT*	*125.00*										*125.00*									
100+57.00	*100+85.00*	*RT*	*28.00*										*28.00*									
100+03.00	*101+20.00*	*LT*	*124.00*																		*124.00*	
100+03.00	*101+20.00*	*RT*	*118.00*																		*118.00*	
LAK-84-27.10 SUBTOTALS												*290*	*153*	*311*	*0*	*66*	*0*	*52*	*49*	*24*	*242*	*0*
LAKE-608-3.10																						
99+59.00	*99+71.00*	*LT/RT*	*12.00*	*24.14*	*24.16*	*289.7*	*289.9*	*297.92*	*309.92*	*321.92*		*32.19*		*35.77*	*6.57*			*5.96*	*5.46*	*2.68*		
LAK-608-3.10 SUBTOTALS												*32*		*36*	*7*			*6*	*5*	*3*		
TOTALS CARRIED TO GENERAL SUMMARY												***1087***	***204***	***1178***	***257***			***196***	***183***	***91***	***242***	***51***

NOTES:
(CADD) Length or Area measured by CADD in the basemap drawings.
(1) See typical sections for step dimensions.
(2) Stations are measured at the location where the skewed (projected) section intersects the CL R/W.
(3) Length is measured along the perpendicular for the region, as the replacement is skewed.
(4) Pavement steps only apply to one side due to confinement by the curb.
(5) Curb removal and replacement is measured along the face of curb by CADD.
(6) Per D12 Stage 3 comment, add a layer of tack coat between the lifts in the surface course and the asphalt base layers.