

RATE OF RETURN - ECONOMIC ANALYSIS WORKSHEET

County Pike Main Roadway State Route 32 Begin SLM 19 23 End SLM
 Intersecting Roadway State Route 220 Date 02-21-01
 Prepared by R. Chaffin

Ohio Department of Transportation
Office of Traffic Engineering

Year	TIME OF DAY				ROADWAY CONDITION				CRASH TYPE												
	DAY	NITE	N.S.	WET	DRY	N.S.	L.T.	R.T.	ANGLE	REAREND	HEAD ON	S.S.	F.O.	L.T.-Minor	RE-Minor	TOTAL					
	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F	PDO	I/F			
97	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	
98	1	5	1	0	1	5	0	1	5	0	0	0	0	0	0	0	0	0	0	2	5
99	5	0	0	1	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	5	1
TOTAL	8	5	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG.	2.67	1.67	0.33	0.33	0.00	0.00	0.00	0.00	1.67	1.00	0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	3.00

1.	RECOMMENDED IMPROVEMENTS	PDO CRASHES												INJ. - FAT. CRASHES											
		R1	R2	R3	R4	RT	AVG PDO	EST. RED.	R1	R2	R3	R4	RT	AVG INJ-FAT	EST. RED.										
2.	Install overhead flasher						0.00	0.00																	
3.							0.00	0.00																	
4.							0.50	1.67				0.83	0.50												
5.							0.50	1.00				0.50	0.50												
6.							0.00	0.00				0.00	0.00												
7.							0.50	0.33				0.17	0.50												
8.							0.00	0.00				0.00	0.00												
							ESTIMATED PDO CRASH REDUCTION	1.50				ESTIMATED INJ. - FAT. CRASH REDUCTION	1.00												

Project Service Life 10 years
 Present ADT (PADT) 8200
 Future ADT (FADT) 9430
 Average ADT = (PADT + FADT)/2 = (8200 + 9430) / 2 = 8815
 ADT Factor = Average ADT / PADT = 8815 / 8200 = 1.08

Average Annual Benefits
 Annual PDO Benefits = Estimated PDO Crash Reduction * Avg PDO Cost = 1.50 * \$2,500 = \$3,750
 Annual INJ.-FAT. Benefits = Estimated INJ.-FAT. Crash Reduction * Avg INJ.-FAT. Cost = 1.00 * \$67,900 = \$67,900
 Total Benefits = \$71,650
 Average Annual Benefits = Total Benefits * ADT Factor = \$71,650 * 1.08 = \$77,024

Rate of Return
 Project Cost \$50,000
 Maintenance and Energy Costs \$1,000
 Salvage Value \$6,000
 Rate of Return 154%