

Preliminary Estimate

October 4, 2006

Project	Erie Road
Limits	Lewis Avenue to Crabb Road
Project Length	5,300' (1.00 miles)
Road Classification	Local
Township	Bedford

Existing Road Conditions

Traffic Count (ADT & Year)	2,600 (average of 6 counts in 2001)
Pavement Surface and Base	Asphalt over 16' wide Macadam base
Pavement Condition	Fair to poor with failed edges and excessive pavement crown
Average Pavement Width	20'
Average Shoulder Width (each side)	1'
Average Grade Width	26' to 28'

Proposed Design

Pavement Width	22'
Shoulder Width (each side)	2' Gravel
Asphalt Pavement Thickness	4"
Base Treatment	Widen gravel base, pulverize pavement, add stone to correct crown, regrade, and compact
Ditching Required?	An allowance of 1,000 feet of ditching has been included to move ditches out in select areas.

Estimated Costs

Estimated Construction Cost	\$330,000 ^a
10% Construction Contingency	\$33,000 ^b
Preliminary survey and design engineering	\$15,000
Construction engineering, inspection, and staking	\$10,000
Estimated Project Cost	\$388,000

Additional Notes:

1. This estimate is based a few field measurements and a visual inspection. Therefore, a 10% construction contingency has been added to the estimated construction cost to cover any additional items of work that may be need to be added after the survey and design phases of the project are completed.
2. \$15,000 has been included to perform a topographic survey, analyze the proposed cross section, and determine any areas where the ditch will need to be moved out to accommodate the proposed pavement and shoulder width.

Engineer's Opinion of Costs

Project Number: 489-001 Estimate Number: 2 Project Type: Road Rehabilitation Location: Erie Road - Lewis Avenue to Crabb Road Bedford Township, Monroe County, Michigan	Project Engineer: MCRC Date Created: 10/4/2006 Fed/State #: N/A Fed Item: N/A Control Section: N/A
Description: 1.00 miles of aggregate base widening, HMA base crushing & shaping, HMA paving, and aggregate shoulders on Erie Road from Lewis Avenue to Crabb Road in Bedford Township, Monroe County, Michigan	

Line	Pay Item	Description	Quantity	Units	Unit Price	Total
0001	2020004	Tree, Rem, 6 inch to 18 inch (remove as needed for ditch relocation)	10.00	Ea	\$300.00	\$3,000.00
0002	2030001	Culv, Rem, Less than 24 inch (remove cross tiles and select driveway culverts)	43.00	Ea	\$300.00	\$12,900.00
0003	2030005	Culv End, Rem, Less than 24 inch (remove culvert headwalls)	7.00	Ea	\$200.00	\$1,400.00
0004	2040008	Guardrail, Rem (at Lewis Avenue)	200.00	Ft	\$2.00	\$400.00
0005	2040011	Pavt, Rem (4 concrete drives x 35 syd)	140.00	Syd	\$12.00	\$1,680.00
0006	2050011	Embankment, LM (Restore edges along new shoulder - 2 sides x 5,300' x 4' wide x 6 inch depth)	800.00	Cyd	\$20.00	\$16,000.00
0007	2057002	_ (Ditching - move as needed - Gradall crew - 3 days x \$4,000 per day)	10.00	Sta	\$1,200.00	\$12,000.00
0008	2080025	Erosion Control, Silt Fence	200.00	Ft	\$2.00	\$400.00
0009	3020001	Aggregate Base (Crown correction - 5,300' x 26' x 1.5 inch average depth)	1,300.00	Ton	\$18.00	\$23,400.00
0010	3020001	Aggregate Base (Trench widening - 2 sides x 5,300' x 4' wide x 12 inch depth)	3,150.00	Ton	\$18.00	\$56,700.00
0011	3050002	HMA Base Crushing and Shaping (5,300' x 24' + 2 sidestreets x 150 syd)	14,500.00	Syd	\$1.30	\$18,850.00
0012	3070021	Approach, CI II (27 gravel drives x 5 ton)	135.00	Ton	\$25.00	\$3,375.00
0013	3070121	Shoulder, CI II (2 sides x 5,300' x 2' wide x 6 inch depth)	800.00	Ton	\$22.00	\$17,600.00
0014	3070200	Trenching (2 sides x 5,300' x 4' wide x 12 inch depth)	106.00	Sta	\$275.00	\$29,150.00
0015	4010260	Culv, CI C, Conc, 12 inch (2 cross tiles x 48 feet + 4 driveway culverts x 32 feet)	224.00	Ft	\$40.00	\$8,960.00
0016	4037050	_ Adjusting Sanitary Structure	2.00	Ea	\$600.00	\$1,200.00
0017	5020061	HMA Approach (15 asphalt drives x 5 ton + 1 sidestreet x 30 ton)	105.00	Ton	\$120.00	\$12,600.00
0018	5027031	_ HMA, 448 Type 1, Wearing (2,200' x 22' x 2 1/2" #/syd)	600.00	Ton	\$48.00	\$28,800.00
0019	5027031	_ HMA, 448 Type 2, Leveling (2,200' x 22' x 2 1/2" #/syd)	750.00	Ton	\$45.00	\$33,750.00

Line	Pay Item	Description	Quantity	Units	Unit Price	Total
0020	8010005	Driveway, Nonreinf Conc, 6 inch (4 concrete drives x 25 syd)	100.00	Syd	\$35.00	\$3,500.00
0021	8070000	Guardrail, Type B (replace guardrail at Lewis Avenue)	150.00	Ft	\$25.00	\$3,750.00
0022	8070042	Guardrail Approach Terminal, Type 2B	4.00	Ea	\$2,500.00	\$10,000.00
0023	8070095	Post, Mailbox	25.00	Ea	\$85.00	\$2,125.00
0024	8110111	Pavt Mrkg, Waterborne, 4 inch, Yellow	1,000.00	Ft	\$0.25	\$250.00
0025	8120031	Flag Control, Max. _____	1.00	LS	\$4,000.00	\$4,000.00
0026	8120051	Minor Traf Devices, Max. _____ (Signs, barricades, and plastic drums)	1.00	LS	\$4,000.00	\$4,000.00
0027	8120086	Pavt Mrkg, Type NR, Tape, 4 inch, Yellow, Temp	200.00	Ft	\$1.00	\$200.00
0028	8167011	_ Slope Restoration, 4 inch (Topsoil, seed, fertilizer, & mulch - 2,200' x 32')	7,800.00	Syd	\$2.50	\$19,500.00
0029	8210005	Monument Box, Adj	1.00	Ea	\$500.00	\$500.00
Estimate Total: \$329,990.00						