



Roads Project Advisory Committee Proposals



Roads Project Advisory Committee

William Gollnitz	Chair
James Birley	Vice Chair
Kurt Jones	Council Liaison
D.E. Hagaman	Council Liaison
Maissan Almaskati	Resident
Antonia Grinnan	Resident
Eric McAlexander	Resident

The Roads Project Advisory Committee met on the following dates:

January 31

February 14

February 28

March 13

March 27

April 10

April 24

May 8

All meetings were held in accordance with the State of Michigan Open Meetings Act. All meetings were live-streamed on Zoom.

PROPOSAL 1. – STATUS QUO

While the Village Council's motion which created the Road Advisory Committee directed the committee to bring the Council proposals for the financing for Village Road reconstruction, this first proposal assumes that the Village not reconstruct its roads for the next 5 years and reassess the situation at that time. It is offered due to some residents expressing the feeling that the roads are not in that bad a condition at present and their reluctance to increase taxes to improve them.

Assumptions

The analysis begins with the latest preliminary cost projections given to us by HRC. It assumes the costs will increase 4% a year as projected by HRC. It starts with the figure of current funds available to reconstruct the roads provided by our Treasurer. It also assumes that the Village will continue to put aside \$150,000 a year into the funds available for road reconstruction. It also assumes an increase in the amount of funds available based upon the past 5 years Act 51 funds received by the Village over the amount of expenses the Village has incurred over the past 5 years (for snow removal, fixing pot holes, etc.) of approximately \$50,000 a year. See attached Chart 1.

Results

The results show the estimated shortfall in funds available to do a Select Rehab of the roads after Fiscal Year 2027-28 will increase by \$725,455.61. The estimated shortfall in funds for doing the Longer-Term Rehab will increase by \$1,716,478. See attached Chart 2.

While these estimates include a projected 4% increase in the costs for repairing the roads per year, (projected increase in cost of asphalt, salaries for construction workers, etc.) they do not include any increased costs due to the further deterioration of the roads during the next 5 years. As a reminder, the Paser ratings for the vast majority of the Village's roads are currently 3's and 4's. These ratings would be expected to worsen if the Village continues its Status Quo plan for the next 5 years. Moreover, all of the work done by HRC to date, would in 5 years be obsolete and would have to be redone at a significant additional cost to the Village.

VILLAGE OF BINGHAM FARMS ROAD EXPENSE BY FISCAL YEAR

<u>FISCAL YEAR</u>	FY17/18	FY18/19	FY19/20	FY20 /21	FY21/22	FY22/23	AVG.
<u>MAJOR ROADS</u>	\$ 28,854.00	\$ 24,730.00	\$ 52,307.00	\$ 63,406.00	\$ 38,261.00	\$ 35,758.00	\$ 40,552.67
<u>LOCAL ROADS</u>	\$ 25,702.00	\$ 45,315.00	\$ 10,708.00	\$ 43,151.00	\$ 21,862.00	\$ 51,128.00	\$ 32,977.67
<u>TOTAL</u>	\$ 54,556.00	\$ 70,045.00	\$ 63,015.00	\$ 106,557.00	\$ 60,123.00	\$ 86,886.00	\$ 73,530.33

VILLAGE OF BINGHAM FARMS ACT 51 REVENUE VS. EXPENSE BY FISCAL YEAR

<u>MAJOR ROADS REV</u>	\$ 72,490.00	\$ 72,234.00	\$ 77,054.00	\$ 80,622.00	\$ 86,101.00	\$ 96,635.00	\$ 80,856.00
<u>MAJOR ROADS EXP</u>	\$ 28,854.00	\$ 24,730.00	\$ 52,307.00	\$ 63,406.00	\$ 38,261.00	\$ 35,758.00	\$ 40,552.67
<u>LOCAL ROADS REV</u>	\$ 36,542.00	\$ 49,395.00	\$ 39,231.00	\$ 40,435.00	\$ 43,884.00	\$ 50,446.00	\$ 43,322.17
<u>LOCAL ROADS EXP</u>	\$ 25,702.00	\$ 45,315.00	\$ 10,708.00	\$ 43,151.00	\$ 21,862.00	\$ 51,128.00	\$ 32,977.67
<u>TOTAL REV</u>	\$ 109,032.00	\$ 121,629.00	\$ 116,285.00	\$ 121,057.00	\$ 129,985.00	\$ 147,081.00	\$ 124,178.17
<u>TOTAL EXP</u>	\$ 54,556.00	\$ 70,045.00	\$ 63,015.00	\$ 106,557.00	\$ 60,123.00	\$ 86,886.00	\$ 73,530.33
<u>TOTAL REV - TOTAL EXP</u>	\$ 54,476.00	\$ 51,584.00	\$ 53,270.00	\$ 14,500.00	\$ 69,862.00	\$ 60,195.00	\$ 50,647.83

NOTES: ACT 51 Revenue figures include interest income

VILLAGE OF BINGHAM FARMS ROAD COST VS.FUNDING ESTIMATES - STATUS QUO OPTION

FISCAL YEAR	FY23/24	FY24/25	FY25/26	FY26/27	FY27/28***
COSTS - SELECTIVE REHAB*	\$ 8,996,000.00	\$ 9,355,840.00	\$ 9,730,073.60	\$ 10,119,276.54	\$ 10,524,047.61
FUNDING AVAILABLE **	\$ 2,759,980.00	\$ 2,960,628.00	\$ 3,161,276.00	\$ 3,361,924.00	\$ 3,562,572.00
COSTS SELECTIVE REHAB LESS FUNDING AVAILABLE SHORTFALL INCREASE IF WE WAIT	\$ 6,236,020.00	\$ 6,395,212.00	\$ 6,568,797.60	\$ 6,757,352.54	\$ 6,961,475.61 \$ 725,455.61
COSTS - LONGER TERM REHAB*	\$ 14,830,400.00	\$ 15,423,616.00	\$ 16,040,560.64	\$ 16,682,183.07	\$ 17,349,470.39
FUNDING AVAILABLE **	\$ 2,759,980.00	\$ 2,960,628.00	\$ 3,161,276.00	\$ 3,361,924.00	\$ 3,562,572.00
COSTS LONGER TERM REHAB LESS FUNDING AVAILABLE SHORTFALL INCREASE IF WE WAIT	\$ 12,070,420.00	\$ 12,462,988.00	\$ 12,879,284.64	\$ 13,320,259.07	\$ 13,786,898.39 \$ 1,716,478.39

NOTES / ASSUMPTIONS:

*Cost assumes increase per FY of: 4%

** Funding available assumes the current amount of \$2,759,980 + Average (FY17/18 - FY22/23) total revenue - total expense + \$150K each year that is added to the General Assigned Road Fund should there be a surplus @ the end of the each FY close

*** Need to consider HRC costs if the Village were to do nothing for the next number of years I.E. HRC revised cost figures / core samples / attend and review data at Village Meetings

Notes

Notes

PROPOSAL 2- ROAD MAINTENANCE OPTION

One of the options HRC mentioned as possible for the Village Roads is to institute a road maintenance program. HRC indicated this program would cost approximately \$150,000 a year. During an April meeting between HRC and representatives of the Village, HRC indicated this estimate was based upon imputing figures into a State of Michigan program to come up with the estimate. No further analysis as to what this program would look like for Bingham Farms has been done at this time. At the April meeting, HRC also indicated that a road maintenance program achieves the best results when done on roads that are in fairly good condition when the program starts. The only roads in Bingham Farms that are currently in good enough shape to get the maximum benefit from such a program are Brooks Lane, Coachlight and Old Stage. While the other roads in their current condition could benefit somewhat from a road maintenance program, there would be less “bang for the buck” if they were included in such a program before being redone.

Assumptions

The analysis begins with the latest preliminary cost projections given to us by HRC. It assumes the costs will increase 4% a year, as projected by HRC. It assumes the current amount available as estimated by the Village Treasurer. It assumes the Village will continue to put aside \$150,000 from its budget, but unlike option 1, assumes that these funds go towards the road maintenance program. It also assumes an increase in the amount of funds available to reconstruct the roads based upon the past 5 years Act 51 funds received by the Village over the amount of expenses the Village has incurred over the past 5 years (for snow removal, SALT, fixing potholes, etc.). of approximately \$50,000 a year. See attached chart 1. Finally, this option assumes (as does option 3) significant cost savings from HRC’s original estimate by turning Timber Trail into a path and obtaining a grant to fund the cost of doing so.

Results

The results show the estimated shortfall in funds available to do a Selective Rehab of the Roads after Fiscal Year 2027-28 will increase by \$1,224,067. See chart 3. This figure is higher than the figure for Option 1 due to the fact that the \$150,000 being saved each year for the roads from the current budget will be spent on road maintenance rather than saved for road reconstruction as in Option 1. However, given that HRC indicates that currently only 3 of the Villages roads would benefit fully from a long- term maintenance program at this time, it is possible that not all of the budgeted \$150,000 a year will be used for road maintenance. Any amounts not used could be added to the funds available to reconstruct the roads and thus reduce the funding shortfall. Unlike Option 1, this option would slow the deterioration of the roads included in the rehab plan.

VILLAGE OF BINGHAM FARMS ROAD EXPENSE BY FISCAL YEAR

<u>FISCAL YEAR</u>	FY17/18	FY18/19	FY19/20	FY20 /21	FY21/22	FY22/23	AVG.
<u>MAJOR ROADS</u>	\$ 28,854.00	\$ 24,730.00	\$ 52,307.00	\$ 63,406.00	\$ 38,261.00	\$ 35,758.00	\$ 40,552.67
<u>LOCAL ROADS</u>	\$ 25,702.00	\$ 45,315.00	\$ 10,708.00	\$ 43,151.00	\$ 21,862.00	\$ 51,128.00	\$ 32,977.67
<u>TOTAL</u>	\$ 54,556.00	\$ 70,045.00	\$ 63,015.00	\$ 106,557.00	\$ 60,123.00	\$ 86,886.00	\$ 73,530.33

VILLAGE OF BINGHAM FARMS ACT 51 REVENUE VS. EXPENSE BY FISCAL YEAR

<u>MAJOR ROADS REV</u>	\$ 72,490.00	\$ 72,234.00	\$ 77,054.00	\$ 80,622.00	\$ 86,101.00	\$ 96,635.00	\$ 80,856.00
<u>MAJOR ROADS EXP</u>	\$ 28,854.00	\$ 24,730.00	\$ 52,307.00	\$ 63,406.00	\$ 38,261.00	\$ 35,758.00	\$ 40,552.67
<u>LOCAL ROADS REV</u>	\$ 36,542.00	\$ 49,395.00	\$ 39,231.00	\$ 40,435.00	\$ 43,884.00	\$ 50,446.00	\$ 43,322.17
<u>LOCAL ROADS EXP</u>	\$ 25,702.00	\$ 45,315.00	\$ 10,708.00	\$ 43,151.00	\$ 21,862.00	\$ 51,128.00	\$ 32,977.67
<u>TOTAL REV</u>	\$ 109,032.00	\$ 121,629.00	\$ 116,285.00	\$ 121,057.00	\$ 129,985.00	\$ 147,081.00	\$ 124,178.17
<u>TOTAL EXP</u>	\$ 54,556.00	\$ 70,045.00	\$ 63,015.00	\$ 106,557.00	\$ 60,123.00	\$ 86,886.00	\$ 73,530.33
<u>TOTAL REV - TOTAL EXP</u>	\$ 54,476.00	\$ 51,584.00	\$ 53,270.00	\$ 14,500.00	\$ 69,862.00	\$ 60,195.00	\$ 50,647.83

NOTES: ACT 51 Revenue figures include interest income

VILLAGE OF BINGHAM FARMS ROAD COST VS.FUNDING ESTIMATES - ROAD MAINTENANCE OPTION

<u>FISCAL YEAR</u>	<u>FY23/24</u>	<u>FY24/25</u>	<u>FY25/26</u>	<u>FY26/27</u>	<u>FY27/28***</u>
COSTS - SELECTIVE REHAB*	\$ 8,399,100.00	\$ 8,735,064.00	\$ 9,084,466.56	\$ 9,447,845.22	\$ 9,825,759.03
FUNDING AVAILABLE **	\$ 2,759,980.00	\$ 2,810,628.00	\$ 2,861,276.00	\$ 2,911,924.00	\$ 2,962,572.00
COSTS SELECTIVE REHAB LESS FUNDING AVAILABLE	\$ 5,639,120.00	\$ 5,924,436.00	\$ 6,223,190.56	\$ 6,535,921.22	\$ 6,863,187.03
SHORTFALL INCREASE IF WE WAIT					\$ 1,224,067.03
COSTS - LONGER TERM REHAB*	\$ 13,910,900.00	\$ 14,467,336.00	\$ 15,046,029.44	\$ 15,647,870.62	\$ 16,273,785.44
FUNDING AVAILABLE **	\$ 2,759,980.00	\$ 2,810,628.00	\$ 2,861,276.00	\$ 2,911,924.00	\$ 2,962,572.00
COSTS LONGER TERM REHAB LESS FUNDING AVAILABLE	\$ 11,150,920.00	\$ 11,656,708.00	\$ 12,184,753.44	\$ 12,735,946.62	\$ 13,311,213.44
SHORTFALL INCREASE IF WE WAIT					\$ 2,160,293.44

NOTES / ASSUMPTIONS:

*Cost assumes increase per FY of:

4% Costs also decreased by \$596,900 & \$919,500 due to Timber Trail converted into a path

** Funding available assumes the current amount of \$2,759,980 + Average (FY17/18 - FY22/23) total revenue - total expense - \$150K road maintenance option + \$150K each year that is added to the General Assigned Road Fund should there be a surplus @ the end of the each FY close

*** Need to consider HRC costs if the Village were to do nothing for the next number of years I.E. HRC revised road cost figures / HRC expenses for field work services (updated core sample / passer ratings) attend and review @ Village Meetings

Notes

Notes

Proposal 3: Revised Alternative to HRC Selective Short and Long-Term Rehabilitation

Outline:

Hubble, Roth and Clark's (HRC) latest proposal are a mix of selective short and long-term rehabilitations. They have emphasized the total will depend on the village's goal for their public roads (PASER ratings). The Road Advisory Committee is currently evaluating different options.

The selective rehabilitation presented by HRC is primarily resurfacing/capping with some drainage improvements for most of the roads in the village. Four roads (Bristol Lane and its courts) have been designated as "Longer-Term Rehabilitation", i.e. complete asphalt removal and replacement with major drainage upgrades. The cost of this longer-term rehabilitation (\$4.37MM) is 48% of the HRC total recommendation of \$9.00MM. This equates to twice the cost of resurfacing as calculated from Bingham Road (\$320/lineal ft of road) vs Bristol Lane (\$644/lineal ft of road) for complete asphalt replacement.

Both Bingham Road and Bristol Lane were initially paved in 1984 and resurfaced in 2003 and 2005 respectively. Both roads had an effective lifespan of approximately 20 years between rehabilitations (without regular preventive maintenance). If we complete the longer-term rehabilitation of Bristol Lane (and its' courts), will it last 40 years? (as expected, when spending twice as much). The answer, however, is HRC could not guarantee this outcome per our February 14th meeting. Even if this long-term proposal lasted 30 years, the Village would need two cycles of rehabilitation to recover the initial investment (or approximately 60 years).

Proposal:

A revised proposal, based on village history, would be to resurface Bristol Lane (and respective courts) with drainage upgrades (as proposed for Bingham Road). If we adopt Bingham Road as the surrogate, the cost for resurfacing and drainage improvements are:

Bristol Lane: \$1,098,075 (at 4000 ft. 100ft has been rehabilitated with a newer turnaround)

Bristol Court: \$407,326

Britner Court: \$176,464

Sager Court: \$223,070

Total: \$1,904,934

This represents a savings of approximately \$2.4MM. With the HRC recommendation of yearly preventative maintenance based on Michigan Department of Transportation guidance, we can extend this life of the roads beyond 20 years.

Additional savings can come from eliminating selective rehabilitation of Brooks Lane (PASER rating 8) for a savings of \$113,100. Conversion of Timber Trail (2,215 ft) to a walking path or trail with removable bollards at either end. Savings of \$434,200 assuming matching grant application is successful as proposed by Ken Marten on March 13th, 2024.

This puts the total selective rehabilitation cost at \$5,987,122.

Proposal 3: Revised Alternative to HRC Selective Short and Long-Term Rehabilitation

Lastly, the construction contingency fee of 25% is likely a conservative overestimation as stated by HRC during the February 14th and April 1st meetings. HRC maintained the target would be closer to 10% after engineering and quotes are complete. Additionally, some minor engineering savings can be accomplished by eliminating discretionary line items. This represents a potential cost avoidance of \$802,754.

With this further opportunity, the total cost estimate would be **\$5,184,368 (see table 1)**.

Importantly, these cost estimates would be revised after HRC is contacted to write a scope of work (SOW) document and then go out to several contractors for competitive bidding.

Workplan:

With the reduction in cost of the project and the addition of revenue through a millage increase/grants/philanthropic donations, the roads could be rehabilitated with the following assumptions (all calculations in 2024 dollars):

1. Starting point of \$2,759,980 road fund as stated by village treasurer
2. 1 or 2 mill increase for road improvement (over fixed time frame)
3. Act 51 yearly surplus averaging \$60,000
4. Short term loan from Michigan's State Infrastructure Bank (SIB). The current interest rate is 3.25%. SIB will provide loans up to \$2,000,000.
 - 8-year SIB loan of \$1,500,000 with a 1 Mill increase (table 2)
 - Or 3-year SIB loan of \$650,000 with a 2 Mill increase (table 3)
5. These amounts could be reduced with philanthropic donations or further grants.

Note: SIB loans a maximum of \$2,000,000 per application/area with negotiated term and 3.25% annual interest rate. Must be sponsored by county.

<https://www.michigan.gov/mdot/programs/grant-programs/sib>

A proposed schedule by year could be:

1. **2025:** Road improvements \$1,191,708
 - a. Bristol Ct., Britner Ct., Sager Ct., Bingham Ln
2. **2026:** Road improvements \$1,152,172
 - a. Bristol Lane, Hickory Hollow
3. **2027:** Road improvements \$1,608,311
 - a. Bingham Road, Timber Trail
4. **2028:** Road improvements \$1,232,177
 - a. Shagwood, Old Orchard, Coachlight, Old Stage, Fromm Ct.

This proposed schedule is contingent on kicking off HRC engineering work in May 2024. Timeline for HRC work:

- May-Oct: HRC engineering study on Bristol Ct., Britner Ct., Sager Ct., Bingham Lane.
- November: Construct statement of work (SOW) for bidding.
- December: Bid contractors for 2025 work.
- January: Award contracts.

Proposal 3: Revised Alternative to HRC Selective Short and Long-Term Rehabilitation

With the addition of a yearly preventive maintenance plan based on MDOT guidelines, the Village of Bingham Farms could maintain PASER ratings in the 5-8 range for an extended period (potentially 20+ years). This preventive maintenance plan could consist of two-yearly inspections (late spring after frost and early fall for winter preparation) by an engineering firm to identify areas for improvement such as, crack sealing, capping, culvert blockage/repair, drainage issues, and/or erosion.

Conclusion:

Based on the history of paved roads in the Village of Bingham Farms, the most cost-effective solution for rehabilitation is a selective mix of resurfacing, capping, drainage/erosion improvements, and spot repair of sub-grade. The preventive maintenance plan is estimated at \$150,000/year per MDOT guidelines (which has in principle, been accepted by the village council).

With the addition of semi-annual inspections and repairs, our village roads rehabilitation cycle can be extended beyond 20 years.

Lastly, to execute this plan, HRC must be kicked off on engineering by May 2024 to complete their study, statement of work (for 2025 proposed work) and bidding to avoid increased costs.

Table 1: Revised Cost Estimates for Road Rehabilitation

Road	Original	Base	Contingency	Engineering	Revised Proposal	
			10%	23%		
Bingham Lane	\$ 569,400	\$ 364,400	\$ 36,440	\$ 92,193	\$ 493,033	
Bingham Road	\$ 1,694,800	\$ 1,084,600	\$ 108,460	\$ 274,404	\$ 1,467,464	
Bristol Lane	\$ 2,640,600	\$ 702,768	\$ 70,277	\$ 177,800	\$ 950,845	Note 2
Bristol Ct	\$ 889,800	\$ 260,688	\$ 26,069	\$ 65,954	\$ 352,711	Note 1
Britner Ct	\$ 424,800	\$ 112,937	\$ 11,294	\$ 28,573	\$ 152,803	Note 1
Brooks Ln	\$ 113,100		\$ -	\$ -	\$ -	
Coachlight Ln	\$ 163,600	\$ 104,700	\$ 10,470	\$ 26,489	\$ 141,659	
Fromm Ct	\$ 252,300	\$ 161,400	\$ 16,140	\$ 40,834	\$ 218,374	
Hickory Hollow	\$ 224,800	\$ 148,800	\$ 14,880	\$ 37,646	\$ 201,326	
Old Orchard Trail	\$ 384,900	\$ 246,300	\$ 24,630	\$ 62,314	\$ 333,244	
Old Stage Road	\$ 218,100	\$ 139,600	\$ 13,960	\$ 35,319	\$ 188,879	
Sager Ct	\$ 418,600	\$ 142,765	\$ 14,276	\$ 36,119	\$ 193,160	Note 1
Shagwood Dr	\$ 404,300	\$ 258,700	\$ 25,870	\$ 65,451	\$ 350,021	
Timber Trail	\$ 596,900	\$ 104,100	\$ 10,410	\$ 26,337	\$ 140,847	Note 3
Total	\$ 8,996,000				\$ 5,184,368	
Note 1: Scaled based on Bingham Road less Culvert, 2 ROOC, Guardrail, Curb improvements					\$ 187,900.00	
Note 2: Based on Note 1 with addition of 1 ROOC for 13 Mile Road					\$ 23,450.00	
Note 3: Shows half the required cost. Second half will come from grant.						
					Average / Year	
					\$ 1,296,092	

Proposal 3: Revised Alternative to HRC Selective Short and Long-Term Rehabilitation

Table 2: 1 Mill Increase in Property Taxes for 11 years (\$2.15MM taxpayer contribution)

Year	Millage Rev	General Fund	Act 51	SIB Loan+Int	GF Interest	Expenditure (not incl maint)
2024	\$ -	\$ 2,759,980				
2025	\$ 195,371	\$ 1,823,643	\$ 60,000			\$ 1,191,708
2026	\$ 195,371	\$ 926,842	\$ 60,000			\$ 1,152,172
2027	\$ 195,371	\$ 1,073,902	\$ 60,000	\$ 1,500,000		\$ 1,608,311
2028	\$ 195,371	\$ 48,346	\$ 60,000	\$ (48,750)		\$ 1,232,177
2029	\$ 195,371	\$ 255,934	\$ 60,000	\$ (48,750)	\$ 967	
2030	\$ 195,371	\$ 467,673	\$ 60,000	\$ (48,750)	\$ 5,119	
2031	\$ 195,371	\$ 683,648	\$ 60,000	\$ (48,750)	\$ 9,353	
2032	\$ 195,371	\$ 903,942	\$ 60,000	\$ (48,750)	\$ 13,673	
2033	\$ 195,371	\$ 1,128,642	\$ 60,000	\$ (48,750)	\$ 18,079	
2034	\$ 195,371	\$ 1,357,835	\$ 60,000	\$ (48,750)	\$ 22,573	
2035	\$ 195,371	\$ 91,613	\$ 60,000	\$ (1,548,750)	\$ 27,157	
Note 1: General Fund interest rate 2.0%						
Note 2: 3.25% interest in SIB loan						

Table 3: 2 Mill Increase in Property Taxes for 6 years (\$2.3MM taxpayer contribution)

Year	Millage Rev	General Fund	Act 51	SIB Loan+Int	Expenditure (not incl maint)
2024	\$ -	\$ 2,759,980			
2025	\$ 390,742	\$ 2,019,014	\$ 60,000		\$ 1,191,708
2026	\$ 390,742	\$ 1,317,584	\$ 60,000		\$ 1,152,172
2027	\$ 390,742	\$ 810,015	\$ 60,000	\$ 650,000	\$ 1,608,311
2028	\$ 390,742	\$ 7,455	\$ 60,000	\$ (21,125)	\$ 1,232,177
2029	\$ 390,742	\$ 437,072	\$ 60,000	\$ (21,125)	
2030	\$ 390,742	\$ 216,689	\$ 60,000	\$ (671,125)	
Note 1: Does not consider interest on Road General Fund					
Note 2: 3.25% interest in SIB loan					

Notes

Notes

Proposal 4: HRC Selective Short and Long-Term Rehabilitation with Revised Contingency

Outline:

Hubble, Roth and Clark's (HRC) latest proposal are a mix of selective short and long-term rehabilitations. They have emphasized the total will depend on the village's goal for their public roads (PASER ratings). The Road Advisory Committee is currently evaluating different options.

The selective rehabilitation presented by HRC is primarily resurfacing/capping with some drainage improvements for most of the roads in the village. Four roads (Bristol Lane and its courts) have been designated as "Longer-Term Rehabilitation", i.e. complete asphalt removal and replacement with major drainage upgrades. The cost of this longer-term rehabilitation (\$4.37MM) is 48% of the HRC total recommendation of \$9.00MM. This equates to twice the cost of resurfacing as calculated from Bingham Road (\$320/lineal ft of road) vs Bristol Lane (\$644/lineal ft of road) for complete asphalt replacement.

Proposal:

Accept HRC proposal for short and long term rehabilitation with a revised contingency. HRC has stated the contingency is more likely 10% vs 25% (at February 14th meeting with the Road Advisory Team and an April 1st meeting with Ken Marten, Kurt Jones, Eric McAlexander and Jim Birley).

This represents a savings of approximately \$1.17MM. With the HRC recommendation of yearly preventative maintenance based on Michigan Department of Transportation guidance, we can extend this life of the roads beyond 20 years.

Additional savings can come from eliminating selective rehabilitation of Brooks Lane (PASER rating 8) for a savings of \$99,550. Conversion of Timber Trail (2,215 ft) to a walking path or trail with removable bollards at either end. Assuming matching grant application is successful as proposed by Ken Marten on March 13th, 2024.

This puts the total rehabilitation cost at \$7,460,650 (see Table 1).

Importantly, these cost estimates would be revised after HRC is contacted to write a scope of work (SOW) document and then go out to several contractors for competitive bidding.

Workplan:

With the reduction in cost of the project and the addition of revenue through a millage increase/grants/philanthropic donations, the roads could be rehabilitated with the following assumptions (all calculations in 2024 dollars):

1. Starting point of \$2,759,980 road fund as stated by village treasurer
2. 2.1 Millage increase for road improvement over 13 years (\$4.9MM)
3. Act 51 yearly surplus averaging \$60,000
4. \$3.9MM 10 year bond issued in near term to fund roads. To be paid back with millage revenue. See Table 2.

Proposal 4: HRC Selective Short and Long-Term Rehabilitation with Revised Contingency

A proposed schedule by year could be:

1. **2025:** Road improvements \$2,026,063
 - a. Bristol Ct., Britner Ct., Sager Ct., Bingham Ln
2. **2026:** Road improvements \$2,528,350
 - a. Bristol Lane, Hickory Hollow
3. **2027:** Road improvements \$1,654,025
 - a. Bingham Road, Timber Trail
4. **2028:** Road improvements \$1,252,213
 - a. Shagwood, Old Orchard, Coachlight, Old Stage, Fromm Ct.

This proposed schedule is contingent on kicking off HRC engineering work in May 2024. Timeline for HRC work:

- May-Oct: HRC engineering study on Bristol Ct., Britner Ct., Sager Ct., Bingham Lane.
- November: Construct statement of work (SOW) for bidding.
- December: Bid contractors for 2025 work.
- January: Award contracts.

With the addition of a yearly preventive maintenance plan based on MDOT guidelines, the Village of Bingham Farms could maintain PASER ratings in the 5-8 range for an extended period (potentially 20+ years). This preventive maintenance plan could consist of two-yearly inspections (late spring after frost and early fall for winter preparation) by an engineering firm to identify areas for improvement such as, crack sealing, capping, culvert blockage/repair, drainage issues, and/or erosion.

Conclusion:

Based on the history of paved roads in the Village of Bingham Farms, the most cost-effective solution for rehabilitation is a selective mix of resurfacing, capping, drainage/erosion improvements, and spot repair of sub-grade. The preventive maintenance plan is estimated at \$150,000/year per MDOT guidelines (which has in principle, been accepted by the village council).

With the addition of semi-annual inspections and repairs, our village roads rehabilitation cycle can be extended beyond 20 years.

Lastly, to execute this plan, HRC must be kicked off on engineering by May 2024 to complete their study, statement of work (for 2025 proposed work) and bidding to avoid increased costs.

Proposal 4: HRC Selective Short and Long-Term Rehabilitation with Revised Contingency

Table 1: Revised Cost Estimates for Road Rehabilitation

Road	Original	Revised Base	Contingency	Engineering	Revised Proposal	
			10%	25%		
Bingham Lane	\$ 569,400	\$ 364,400	\$ 36,440	\$ 100,210	\$ 501,050	
Bingham Road	\$ 1,694,800	\$ 1,084,600	\$ 108,460	\$ 298,265	\$ 1,491,325	
Bristol Lane	\$ 2,640,600	\$ 1,690,000	\$ 169,000	\$ 464,750	\$ 2,323,750	
Bristol Ct	\$ 889,800	\$ 569,400	\$ 56,940	\$ 156,585	\$ 782,925	
Britner Ct	\$ 424,800	\$ 271,800	\$ 27,180	\$ 74,745	\$ 373,725	
Brooks Ln	\$ 113,100	\$ 72,400	\$ 7,240	\$ 19,910		
Coachlight Ln	\$ 163,600	\$ 104,700	\$ 10,470	\$ 28,793	\$ 143,963	
Fromm Ct	\$ 252,300	\$ 161,400	\$ 16,140	\$ 44,385	\$ 221,925	
Hickory Hollow	\$ 224,800	\$ 148,800	\$ 14,880	\$ 40,920	\$ 204,600	
Old Orchard Trail	\$ 384,900	\$ 246,300	\$ 24,630	\$ 67,733	\$ 338,663	
Old Stage Road	\$ 218,100	\$ 139,600	\$ 13,960	\$ 38,390	\$ 191,950	
Sager Ct	\$ 418,600	\$ 267,900	\$ 26,790	\$ 73,673	\$ 368,363	
Shagwood Dr	\$ 404,300	\$ 258,700	\$ 25,870	\$ 71,143	\$ 355,713	
Timber Trail	\$ 596,900	\$ 208,200	\$ 20,820	\$ 57,255	\$ 143,138	Note 1
Total	\$ 8,996,000				\$ 7,441,088	
					Average / Year	
					\$ 1,860,272	

Note 1: Half of the required funding is displayed. The second half will come from a grant.

Table 2: 2.1 Mill Increase in Property Taxes for 12 years (\$4.9MM total)

Year	Millage Rev	General Fund	Act 51	Interest	Principle	Remain Principle	Expenditure (not incl maint)
2024	\$ -	\$ 2,759,980					
2025	\$ 410,279	\$ 1,204,197	\$ 60,000				\$ 2,026,063
2026	\$ 410,279	\$ 2,939,266	\$ 60,000	\$ 106,860		\$ 3,900,000	\$ 2,528,350
2027	\$ 410,279	\$ 1,306,141	\$ 60,000	\$ 136,500	\$ 332,441	\$ 3,567,559	\$ 1,634,463
2028	\$ 410,279	\$ 55,266	\$ 60,000	\$ 124,865	\$ 344,077	\$ 3,223,482	\$ 1,252,213
2029	\$ 410,279	\$ 56,604	\$ 60,000	\$ 112,822	\$ 356,119	\$ 2,867,362	
2030	\$ 410,279	\$ 57,942	\$ 60,000	\$ 100,358	\$ 368,584	\$ 2,498,779	
2031	\$ 410,279	\$ 59,280	\$ 60,000	\$ 87,457	\$ 381,484	\$ 2,117,295	
2032	\$ 410,279	\$ 60,617	\$ 60,000	\$ 74,105	\$ 394,836	\$ 1,722,459	
2033	\$ 410,279	\$ 61,955	\$ 60,000	\$ 60,286	\$ 408,655	\$ 1,313,803	
2034	\$ 410,279	\$ 63,293	\$ 60,000	\$ 45,983	\$ 422,958	\$ 890,845	
2035	\$ 410,279	\$ 64,631	\$ 60,000	\$ 31,180	\$ 437,762	\$ 453,083	
2036	\$ 410,279	\$ 65,968	\$ 60,000	\$ 15,858	\$ 453,083	\$ (0)	

Note 1: Does not consider interest on General Fund

Note 2: 3.50% interest on bond

Note 3: Interest in 2026 is cost of bond issuance

Notes

Notes

Bingham Farms Road Committee Proposal 5

Proposal for a Bingham Farms Roads Project Using an Approach that Includes a Special Assessment

The Village desires its roads to have an overall average PASER rating of 5 - 6.

There are 26,985 feet of public roads in Bingham Farms or 5.11 miles. Most of these have PASER ratings of 3 to 4.

There are approximately 493 residences in Bingham Farms of which approximately 253 (51.3%) are on private roads. The private road residents pay for all road maintenance with no funding from the Village.

Old Stage Road and Coachlight Road are the only concrete roads in the Village. Old Stage Road (concrete with PASER rating of 4 – 6) and Coachlight Road (concrete with PASER rating of 5) can both be brought up to a 5 or 6 PASER without a lot of expense. Also, Brooks Lane does not need much attention as it already has a PASER rating of 8. These three roads are not considered in this analysis.

Bingham Road is the only road considered as a major road. This is important because a portion of the Act 51 funds are restricted for use only on major roads. In the 2023 budget, the balance in the major road fund is \$842,068 and can **only** be used for work on Bingham Road.

The current balance in the Village fund that can be allocated to the roads is \$2,759,980. If we subtract the major road fund of \$842,068, the total currently available for all other Village local roads is \$1,917,912.

Additionally, Timber Trail is designated to become a “path”. Suitable for walking and bike riding but not for motorized vehicles other than emergency vehicles. Assuming a grant and a lower cost option for a path, the cost for Timber Trails is \$140,847.

Assumptions used in this option.

- The value of a 1 millage increase today is \$195,371 per year.
- Taxable value of properties will increase at 2.5% per year.
- The general fund will generate interest income of 2% per year.
- Act 51 money of \$60,000 per year is split between the major road fund (Bingham Road) at \$35,000 per year and the local road fund at \$25,000 per year.
- Three Special Assessment Districts (SAD) will be established. (Detail below).
- Each lot in a SAD will be assessed \$500 per year for 10 years.
- Road construction costs are the same as used in the Roads Committee Option 3.
- Road construction costs will increase at 4% per year.
- Additional funding will come from an SIB loan of \$1.5 million at an interest rate of 3.25% beginning in 2027.

Special Assessment District 1:

SAD 1 will be established in 2025 and will include all lots on Bristol Lane, Sager Ct, Bristol Ct, and Britner Ct. Road construction will take place in 2025. There are 67 lots in SAD 1. Construction costs will be \$1,649,519. There is enough money in the general fund to pay for this work without additional funding.

Special Assessment District 2:

SAD 2 will be established in 2027 and will include all lots on Bingham Lane, Old Orchard Trail, Hickory Hollow, Shagwood and Fromm Ct. Construction will take place in 2027. There are 85 lots in SAD 2. Construction costs will be \$1,726,231. Additional funding will be required for this work. Funding will come from an SIB loan of \$1.5 million at 3.25%

Special Assessment District 3:

SAD 3 will be established in 2028 and will include all lots on Bingham Road and Timber Trail (there is only 1 lot on Timber Trail). Construction costs will be \$1,809,131. There are 37 lots in SAD 3. Funding from the major road fund can now be used. No further outside funding will be required.

The table below shows the detail of each of the SADs and cost of construction at current estimates.

Road Name	SAD	Road Surface	Short Term/PM	Cost per Foot	Last Resurfacing	PASER Rating	Year for Rehabilitation
Sager Ct	SAD 1	Asphalt	\$ 193,160	\$ 278	2005	3	2025
Britner Ct	SAD 1	Asphalt	\$ 152,803	\$ 230	2005	3	2025
Bristol Ct	SAD 1	Asphalt	\$ 352,711	\$ 230	2005	3	2025
Bristol Lane	SAD 1	Asphalt	\$ 950,845	\$ 238	2005	3 and 4	2025
			\$ 1,649,519				
Bingham Lane	SAD 2	Asphalt	\$ 493,033	\$ 132	2008	4	2027
Old Orchard Trail	SAD 2	Asphalt	\$ 333,244	\$ 131	2009	3	2027
Hickory Hollow	SAD 2	Asphalt	\$ 201,326	\$ 229	2005	3	2027
Shagwood	SAD 2	Asphalt	\$ 350,021	\$ 197	2009	3	2027
Fromm Ct	SAD 2	Asphalt	\$ 218,374	\$ 161	2010	4	2027
			\$ 1,595,998				
Bingham Road	SAD 3	Asphalt	\$ 1,467,464	\$ 278	2003	4	2028
Timber Trail	SAD 3	Asphalt	\$ 140,847	\$ 64	NEVER	1	2028
			\$ 1,608,311				

The table below is the financial model using the above assumptions.

Year	Millage Revenue at 1 mill increase and Taxable Value Increase of 2.5% per year	General Fund with Annual Interest Rate of 2.0%	Act 51	Per Lot Assessment	Total Assessment Per Year	SIB Loan + 3.25% Int	Expenditure (not incl. maint)
2024		\$ 1,917,912		\$ -	\$ -	\$ -	\$ -
2025	\$ 195,371	\$ 522,264	\$ 25,000	\$ 500	\$ 33,500	\$ -	\$ 1,649,519
2026	\$ 200,255	\$ 796,640	\$ 25,000	\$ 500	\$ 33,500	\$ -	\$ -
2027	\$ 205,262	\$ 894,204	\$ 25,000	\$ 500	\$ 76,000	\$ 1,500,000	\$ 1,726,231
2028	\$ 210,393	\$ 404,082	\$ 60,000	\$ 500	\$ 94,500	\$ (48,750)	\$ 1,809,131
2029	\$ 215,653	\$ 739,994	\$ 60,000	\$ 500	\$ 94,500	\$ (48,750)	\$ -
2030	\$ 221,044	\$ 1,088,124	\$ 60,000	\$ 500	\$ 94,500	\$ (48,750)	\$ -
2031	\$ 226,570	\$ 1,448,854	\$ 60,000	\$ 500	\$ 94,500	\$ (48,750)	\$ -
2032	\$ 232,235	\$ 292,575	\$ 60,000	\$ 500	\$ 94,500	\$ (1,548,750)	\$ -
2033	\$ -	\$ 456,017	\$ 60,000	\$ 500	\$ 94,500	\$ -	\$ -
2034	\$ -	\$ 622,727	\$ 60,000	\$ 500	\$ 94,500	\$ -	\$ -
2035	\$ -	\$ 758,602	\$ 60,000	\$ 500	\$ 61,000	\$ -	\$ -
2036	\$ -	\$ 897,194	\$ 60,000	\$ 500	\$ 61,000	\$ -	\$ -
2037	\$ -	\$ 995,207	\$ 60,000	\$ 500	\$ 18,500	\$ -	\$ -

Observations:

- All Bingham Farms residents and commercial property owners will incur a 1 millage increase in the taxable value of their properties for 8 years beginning in 2025 and ending when the loan is repaid in 2032.
- The SIB loan of \$1.5 million will be taken in 2027 and will be fully paid back in 2032.
- Assessments continue for 10 years beginning the year the SAD is created and ending 10 years later.
- The 3 SAD's will collect \$945,000 over a 13-year period from 2025 – 2037. These assessments will be paid by the residents in the SADs who will receive the direct benefit of road construction. There are approximately 189 residences in the SADs and almost 500 residences in all of Bingham Farms plus commercial property owners.
- At the end of all construction, the payback of the loan, and the end of the assessment period in 2037, there will be \$995,207 in the general fund giving the Village Council some options:
 - Use the fund to support another future road or infrastructure project.
 - Use a millage increase of less than 1.
 - Reduce the assessment period.
 - Or any combination of the above.

We believe this to be fair approach to improving the roads in Bingham Farms while considering that more than 50% of the Bingham Farms residents live on private roads.

Notes

Notes

Bingham Farms Road Committee Proposal 5A

Proposal for a Bingham Farms Roads Project Using an Approach that Includes a Special Assessment

The Village desires its roads to have an overall average PASER rating of 5 - 6.

There are 26,985 feet of public roads in Bingham Farms or 5.11 miles. Most of these have PASER ratings of 3 to 4.

There are approximately 493 residences in Bingham Farms of which approximately 253 (51.3%) are on private roads. The private road residents pay for all road maintenance with no funding from the Village.

Old Stage Road and Coachlight Road are the only concrete roads in the Village. Old Stage Road (concrete with PASER rating of 4 – 6) and Coachlight Road (concrete with PASER rating of 5) can both be brought up to a 5 or 6 PASER without a lot of expense. Also, Brooks Lane does not need much attention as it already has a PASER rating of 8. These three roads are not considered in this analysis.

Bingham Road is the only road considered as a major road. This is important because a portion of the Act 51 funds are restricted for use only on major roads. In the 2023 budget, the balance in the major road fund is \$842,068 and can **only** be used for work on Bingham Road.

The current balance in the Village fund that can be allocated to the roads is \$2,759,980. If we subtract the major road fund of \$842,068, the total currently available for all other Village local roads is \$1,917,912.

Additionally, Timber Trail is designated to become a “path”. Suitable for walking and bike riding but not for motorized vehicles other than emergency vehicles. Assuming a grant and a lower cost option for a path, the cost for Timber Trails is \$140,847.

Assumptions used in this option.

- Increase millage by 1.8. The value of a 1.8 millage increase today is \$351,668 per year.
- Taxable value of properties will increase at 2.5% per year.
- The general fund will generate interest income of 2% per year.
- Act 51 money of \$60,000 per year is split between the major road fund (Bingham Road) at \$35,000 per year and the local road fund at \$25,000 per year.
- Three Special Assessment Districts (SAD) will be established. (Detail below).
- Each lot in a SAD will be assessed \$750 per year for 10 years.
- Road construction costs are the same as used in the Roads Committee Option 4. Specifically, this uses the original HRC estimates for Bristol Lane, Bristol Ct, Sager Ct., and Britner Ct.
- Road construction costs will increase at 4% per year.
- Additional funding will come from a \$3.9 million 10-year bond at 3.5% interest in 2025.

Special Assessment District 1:

SAD 1 will be established in 2025 and will include all lots on Bristol Lane, Sager Ct, Bristol Ct, and Britner Ct. Road construction will take place in 2025. There are 67 lots in SAD 1. Construction costs will be \$3,848,763. There is not enough money in the general fund to pay for this work without additional funding. A \$3.9 million 10-year bond at 3.5% interest will be issued

Special Assessment District 2:

SAD 2 will be established in 2027 and will include all lots on Bingham Lane, Old Orchard Trail, Hickory Hollow, Shagwood and Fromm Ct. Construction will take place in 2027. There are 85 lots in SAD 2. Construction costs will be \$1,726,231.

Special Assessment District 3:

SAD 3 will be established in 2028 and will include all lots on Bingham Road and Timber Trail (there is only 1 lot on Timber Trail). Construction costs will be \$1,809,131. There are 37 lots in SAD 3. Funding from the major road fund can now be used.

The table below shows the detail of each of the SADs and cost of construction at current estimates.

Road Name	SAD	Road Surface	Short Term/PM	Cost per Foot	Last Resurfacing	PASER Rating	Year for Rehabilitation
Sager Ct	SAD 1	Asphalt	\$ 368,363	\$ 530	2005	3	2025
Britner Ct	SAD 1	Asphalt	\$ 373,725	\$ 562	2005	3	2025
Bristol Ct	SAD 1	Asphalt	\$ 782,925	\$ 510	2005	3	2025
Bristol Lane	SAD 1	Asphalt	\$ 2,323,750	\$ 581	2005	3 and 4	2025
			\$ 3,848,763				
Bingham Lane	SAD 2	Asphalt	\$ 493,033	\$ 132	2008	4	2027
Old Orchard Trail	SAD 2	Asphalt	\$ 333,244	\$ 131	2009	3	2027
Hickory Hollow	SAD 2	Asphalt	\$ 201,326	\$ 229	2005	3	2027
Shagwood	SAD 2	Asphalt	\$ 350,021	\$ 197	2009	3	2027
Fromm Ct	SAD 2	Asphalt	\$ 218,374	\$ 161	2010	4	2027
			\$ 1,595,998				
Bingham Road	SAD 3	Asphalt	\$ 1,467,464	\$ 278	2003	4	2028
Timber Trail	SAD 3	Asphalt	\$ 140,847	\$ 64	NEVER	1	2028
			\$ 1,608,311				

The table below is the financial model using the above assumptions.

Year	Millage Revenue at 1.8 mill increase and Taxable Value Increase of 2.5% per year	General Fund with Annual Interest Rate of 2.0%	Act 51	Per Lot Assessment	Total Assessment Per Year	\$3,900,000 10 year Bond at 3.5% Interest	Interest	Principal	Remaining Principal	Expenditure (not incl. maint)
2024		\$ 2,759,980		\$ -	\$ -	\$ -				\$ -
2025	\$ 351,668	\$ 3,229,601	\$ 60,000	\$ 750	\$ 50,250	\$ 3,900,000	\$ 106,860	\$ -	\$ 3,900,000	\$ 3,848,763
2026	\$ 360,460	\$ 3,635,086	\$ 60,000	\$ 750	\$ 50,250		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2027	\$ 369,471	\$ 2,362,143	\$ 60,000	\$ 750	\$ 114,000		\$ 136,500	\$ -	\$ 3,900,000	\$ 1,726,231
2028	\$ 378,708	\$ 1,016,910	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ 1,809,131
2029	\$ 388,176	\$ 1,499,742	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2030	\$ 397,880	\$ 2,002,129	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2031	\$ 407,827	\$ 2,524,711	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2032	\$ 418,023	\$ 3,068,143	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2033	\$ 428,473	\$ 3,633,104	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2034	\$ -	\$ 3,772,321	\$ 60,000	\$ 750	\$ 141,750		\$ 136,500	\$ -	\$ 3,900,000	\$ -
2035	\$ -	\$ (114,933)	\$ 60,000	\$ 750	\$ 91,500		\$ 136,500	\$ 3,900,000	\$ -	\$ -
2036	\$ -	\$ 37,298	\$ 60,000	\$ 750	\$ 91,500		\$ -	\$ -	\$ -	\$ -
2037	\$ -	\$ 127,549	\$ 60,000	\$ 750	\$ 27,750		\$ -	\$ -	\$ -	\$ -

Observations:

- All Bingham Farms residents and commercial property owners will incur a 1.8 millage increase in the taxable value of their properties for 9 years beginning in 2025 and ending in 2033.
- The bond of \$3.9 million will be issued in 2025 and will be fully paid back in 2035.
- Assessments continue for 10 years beginning the year the SAD is created and ending 10 years later.
- The 3 SAD's will collect \$1,417,500 over a 13-year period from 2025 – 2037. These assessments will be paid by the residents in the SADs who will receive the direct benefit of road construction. There are approximately 189 residences in the SADs and almost 500 residences in all of Bingham Farms plus commercial property owners.
- At the end of all construction, the payback of the bond, and the end of the assessment period in 2037, there will be \$127,549 in the general fund.
 - Note that using a 1.8 millage increase, the general fund will have a negative balance of (\$114,933) in 2035 when the bond is paid off.

We believe this to be fair approach to improving the roads in Bingham Farms while considering that more than 50% of the Bingham Farms residents live on private roads.

Notes

Notes



Roads Project Advisory Committee Communication

To: Village Council

From: Ken Marten, Village Manager

Date: May 16, 2024

Re: Additional thoughts and notes

Dear Village Council:

During its research and discussions, members of the Roads Project Advisory Committee made several observations and/or discovered noteworthy findings that aren't necessarily part of any specific proposal yet are worth highlighting.

Engineering considerations

- HRC Engineering consultant Brad Shepler provided a draft order for road reconstruction based on current condition/rating, geography (2/14/24):
 1. Sager Court, Britner Court, Bristol Court
 2. Bristol Lane
 3. Bingham Lane, Brooks Lane, Fromm Court, Old Orchard Trail
 4. Hickory Hollow, Timber Trail, Shagwood Drive
 5. Bingham RoadNote: Coachlight and Old Stage (concrete roads), nor Brooks Lane, are mentioned

- All roads would not be reconstructed in one season
- Shepler noted that an annual 4 percent increase in road construction costs should be expected
- Shepler and HRC engineering consultant William West noted they could not recommend selective rehabilitation for Bristol Road and Courts; reflection cracks in the pavement would likely occur within several years. They realize village cost constraints make selective rehabilitation more attractive and that they'll follow whatever the village determines (subcommittee meeting 4/1/24).

Private vs. public considerations

- Committee member Toni Grinnan presented potential strategies to meet the private road/public road imbalance (4/24/24 memo)
 - Converting private roads to public roads – involves engineering review of private road and one-time “purchase” price
 - Allow private road maintenance to “piggyback” on village road projects – this may offer “economy of scale” and reduce road maintenance/construction costs
 - Village-provided engineering services to private road HOAs



Financing considerations

- Committee member Maissan Almaskati presented financing options beyond millage increases, municipal bonds, State Infrastructure Bank (SIB) loans, special assessments (4/10/24 memo):
 - Create “development fund” that raises capital and invests for future use:
 - Infrastructure improvements (roads, water/sewer)
 - Local land development
 - Amenity improvements/beautification
 - Local economy stimulation
 - Emergencies
 - Capital sources include local biz, Michigan companies, utilities, financial institutions, innovation capital, state/fed agencies, philanthropic foundations
 - Similar to community foundation model: separate board/committee, hire a fund manager

Project considerations

- The committee unanimously approved the assumption of converting Timber Trail into a walking path for all funding proposals (3/13/24)
- The committee generally embraced the “sharrow” concept for Bingham Road
- The committee generally rejected the possible addition of speed bumps on Bingham Road
- Per HRC advice, the committee realizes limited maintenance ideally should be directed toward roads with fair/good PASER ratings in order to retain said ratings (“best bang for the buck” philosophy)

BINGHAM FARMS POST

Autumn 2023 Special Edition: Roads Issue

A BRIEF INTRODUCTION

Most of the village's 5.5 miles of roads are asphalt, which according to industry standards has a lifespan of 15 to 20 years in Midwest climates. And most of the roads are nearing the end of their serviceability.

Village council, staff and its engineering consultants are exploring the implementation

and funding of a road improvement project, which also includes improving the stormwater infrastructure – the ditch and culvert system that carries water from the roads to the Franklin River. This special edition newsletter is dedicated to sharing information with taxpayers, which is why this has been mailed to every residential address in the village.

As you read through these pages, be aware that no decisions have been made. The village is still in the information gathering stage.

ROADS IN THE VILLAGE: WHO OWNS WHAT

Discussion of road reconstruction and/or rehabilitation is only relevant to roads that the village actually owns. There are a number of roads coursing through the village that are either privately-owned or that fall under the jurisdiction of other public entities.

Village-owned roads: There are approximately 5.5 miles of roads for which the village is responsible for upkeep and maintenance. These are Bingham Road and Bingham Lane, Bristol Lane and Bristol Court, Britner Court, Brooks Lane, Coach Light Lane, Fromm Lane, Hickory Hollow Drive, Old Orchard Trail, Old Stage Road, Sager Court, Shagwood Drive and Timber Trail. Village-financed road reconstruction and/or rehabilitation would include only these roads.

Note: There are no homes on Deauville Court, the cul de sac off of Telegraph, and it is not included in the current road resurfacing study.

Private roads: The following roads are privately owned, and their maintenance (as well as the financing of any maintenance) is not the responsibility of the village.

The upkeep is the responsibility of the accompanying homeowners or condo associations: Bingham Court, Bingham Pointe Drive, Cardinal Lane, Outlands Trail, Woodlynne Drive, and all of the roads within the Bingham Woods condo complex. Pioneer Avenue, the short street being constructed off of Thirteen Mile to service two new homes, also falls under this category.

County Roads: Thirteen Mile and Fourteen Mile are within the jurisdiction of the Road Commission for Oakland County (RCOC). Their maintenance, from snow plowing to pothole filling to reconstruction, is the responsibility of RCOC.

Telegraph Road: Also known as U.S. 24, Telegraph's maintenance is the responsibility of the Michigan Department of Transportation, which does contract with RCOC for some services.

Office building access roads: These are all privately owned. Commercial property owners are responsible for maintaining their own access roads and parking lots.

Road	First surfacing	Last resurfacing	Years since last resurfacing
Bingham Road	1984	2003	20
Bingham Lane	1984	2008	15
Brittner Court	1984	2005	18
Bristol Lane	1984	2005	18
Bristol Court	1984	2005	18
Brooks Lane	1984	2013	9
Coachlight Lane	1984	2005	18
Fromm Lane	1984	2010	13
Hickory Hollow	1984	2005	18
Old Orchard Trail	1984	2009	14
Old Stage Road	1984	2005	18
Sager Court	1984	2005	18
Shagwood	1984	2009	14
Timber Trail	1984		39

All roads are asphalt except **Coachlight** and **Old Stage**, which are **concrete**. According to industry standards, the lifespan of an asphalt road is 15 to 20 years. The lifespan of a concrete road is approximately 30 years.

~~~~~

## HRC – BINGHAM’S ENGINEERING CONSULTING FIRM

Hubbell, Roth & Clark, Inc. (HRC) has been the village’s engineering consultant firm since 2015. Its team is compiling information about the condition of village roads and their stormwater systems (the network of ditches, culverts and beehive drains), as well as reconstruction cost estimates.

HRC provides municipal consulting services to governments throughout Michigan including cities, villages, counties, county drain commissions, and townships. Professional engineering services are provided for the planning and development, design, and construction phases of a project. HRC has strong communication and project management policies in place to ensure project cost control and adherence to project schedules.

HRC’s specialty areas include road and bridge design, site/civil engineering, wetland and watershed management, hydrological modeling, surveying, construction administration and management, and landscape architecture. Besides Bingham Farms, some of HRC’s clients include the villages of Beverly

Hills and Franklin; the cities of Berkley, Birmingham, Bloomfield Hills, Southfield and Troy; Bloomfield Township; the Southeast Oakland County Water Authority (Bingham is a member community); the Road Commission for Oakland County.

In February 2023, HRC engineers presented to council its findings to that date. Estimates at that time ranged from \$12.2 million for major rehabilitation of all village-owned roads to \$17 million for complete reconstruction of all village-owned roads. However, the engineers noted that testing results were still being evaluated but the preliminary analysis indicated that the roads appeared to be in better shape than originally assumed, and more surface type preventative maintenance treatments may be able to be utilized which would reduce total costs. HRC will present final estimates to the village this November.

Depending on council's decisions regarding project funding, HRC will likely assist village staff with assembling a capital improvement plan for roads and stormwater, as well as overseeing any bidding processes. HRC doesn't perform actual road construction; that would be the responsibility of the paving company that wins the bid. Any major road project will be subject to the competitive bidding process.

~~~~~

FINANCING OPTIONS

Like all infrastructure, roads need maintenance as they age. Options for financing road reconstruction or rehabilitation projects can be described as limited. Approaches to financing are typically labeled as “pay-as-you-go” or “pay-as-you-use.”

Pay-as-you-go financing: Current taxpayers bear the full cost of the project. This option only uses current fund reserves available at the time. Because road projects are generally expensive, this option generally constrains improvements to small sections of road year by year.

To date, the village has \$3 million available for roads. Realizing that preliminary estimates are greater than \$3 million (and acknowledging that the final estimate likely will be lower – see article above), the pay-as-you-go approach would more than likely limit projects to small sections of roads, year by year. Once those dollars are spent, several years will pass before future savings would support additional road projects. Moreover, it's important to realize that like everything else, road reconstruction costs will increase, and that increase will likely occur at a rate that is faster than the village's ability to save.

Pay-as-you-use financing: This involves borrowing funds to finance projects. Current as well as future taxpayers bear the cost of the project over many years, and the approach achieves what economists call “intergenerational equity.” With payment/repayment spread over the life of the road, the cost is borne by those who currently use it as well as those who will use it in the future. Pay-as-you-use financing can be achieved through creating special assessments or increasing the village's millage rate, which has held at 9.0 for the past four fiscal years.

Grants: Village staff and consultants have applied for grants and have had some success. The PASER Rating study (see Page 6) was funded by a small grant from the Southeast Michigan Council of Governments (SEMCOG). The village was also awarded a “Local Government Critical Infrastructure Planning Grant” from Oakland County, which covers half the cost of stormwater system planning.

Grants are great, but they often have requirements, namely what is termed “local match.” Many state and federal grants have a “50-50 local match” as a condition of acceptance, which means that whatever the grant amount is, the municipality must also commit an equal amount to the cost of the project. For example, a “50-50 local match” grant of \$25,000 would carry the requirement that the awardee commit \$25,000 to the project in question.

Another factor to consider is that many grants are geared toward “assisting economically disadvantaged or underserved communities” (language taken directly from the U.S. Dept. of Transportation “Notice of Funding Opportunity for the Reconnecting Communities and Neighborhoods Program”). That description doesn’t apply to Bingham Farms.

The Michigan Department of Transportation offers a grant known as TEDF Category B, which provides “road funding to the smallest communities in Michigan, particularly those with limited ability to fund road projects.” The maximum grant is a 50-50 local match up to \$250,000. Applications are scored and prioritized as follows (paraphrased from www.michigan.gov/mdot):

- The extent to which a municipality has the ability to fund road projects based on real/personal property value proportional to population
- Projects on local roads
- Projects paired with other infrastructure projects, to encourage efficiencies and coordination
- Projects done together with another municipality’s project, to encourage lower prices and other efficiencies
- Preventive maintenance projects, to encourage better asset management practices

The odds might be slim, but the village will pursue all grant opportunities.

Village funds: Again, to date, the village has \$3 million available for roads. Of that amount, \$765,000 is in the major road fund, which is a “restricted fund” under regulations set forth in the state’s Act 51. Those dollars may only be spent on village-owned “major roads.” Bingham Road is classified as the village’s sole major road.

To date, the village has \$620,000 in the local road fund, also a “restricted fund” under Act 51. Those dollars may only be spent on village-owned “local roads.” This classification includes Bingham Lane, Bristol Lane and Court, Brittner, Brooks, Coach Light, Fromm, Hickory Hollow, Old Orchard, Old Stage, Sager, Shagwood, Timber Trail. Act 51 prohibits the transfer of dollars from one fund to the other.

The remaining dollars – approximately \$1.6 million – are in a separate fund that is not restricted to major or local. These dollars could be applied to a road reconstruction project in either category.

CONTACT THE VILLAGE OFFICE

Have questions or concerns about the content within this newsletter? Please feel free to contact the Village Office for answers or discussion.

The Village Office is in Jamestowne South, 24255 W. Thirteen Mile Road, Suite 190. Contact 248-644-0044, admin@binghamfarms.org.

Office hours are 9 a.m. to 4:30 p.m. Monday through Friday. If those hours aren’t convenient, staff members are willing to arrange an evening meeting time.

MILLAGE RATES IN THE VILLAGE

There has been discussion among village residents about a potential millage increase. Financing for largescale municipal projects such as road reconstruction is often hinged to a voter-approved millage proposal.

It's important to note that the seven-member Village Council hasn't made any decisions yet about road reconstruction or financing. Village engineering consultants are still researching and gathering information, which will be presented to Village Council later this fall. If Village Council decides to seek voter approval for a millage increase, the earliest that a proposal could be included on a regular election ballot is November 2024.

The average taxable value of residential property in Bingham Farms is \$261,215 for the current tax year 2023.

At the village's current tax rate of 9.0 mils, the owner of a residential property with the average taxable value of \$261,215 would pay \$2,351 in taxes to the village in the current tax year 2023.

Using tax year 2023 values, an increase of 1 mil would add \$261.22 (equal to \$21.77 per month) to the annual tax bill of a home with the average taxable value of \$261,215. Village-wide (taxable value including commercial properties), an increase of 1 mil would generate \$195,371.

An increase of 2 mils would add \$522.43 (equal to \$43.54 per month) to the annual tax bill of a home with the average taxable value of \$261,215. Village-wide (taxable value including commercial properties), an increase of 2 mils would generate \$390,743.




An increase of 3 mils would add \$783.64 (equal to \$65.30 per month) to the annual tax bill of a home with the average taxable value of \$261,215. Village-wide (taxable value including commercial properties), an increase of 3 mils would generate \$586,114.

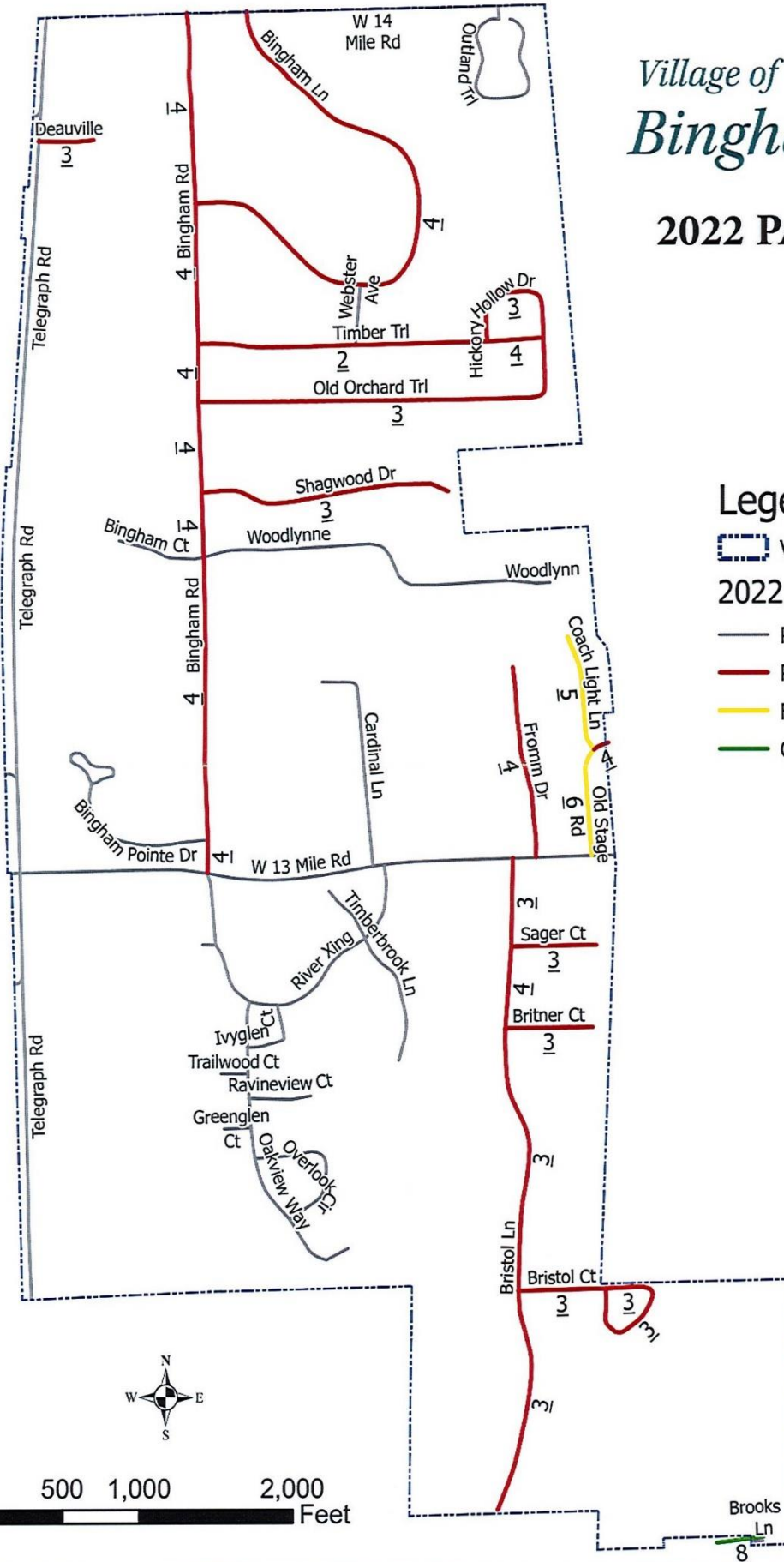
Taxable home value in Tax Year 2023	1 mil increase	2 mil increase	3 mil increase
\$130,607.50 (half the village avg)	\$130.61	\$261.22	\$391.82
\$261,215.00 (village avg)	\$261.21	\$522.43	\$783.64
\$522,430.00 (twice the village avg)	\$522.43	\$1,044.86	\$1,567.29



2022 PASER Ratings

Legend

-  Village Boundary
- 2022 PASER Rating**
-  Private or Federal-Aid Roads
-  Poor: 1 - 4
-  Fair: 5 - 7
-  Good: 8 - 10



VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM PRELIMINARY OPINION OF TOTAL PROJECT COSTS

November 2023
13511

CURRENT ENR (Nov. 2023):

				Estimated Total Project Cost Range ²		
Estimate Number	Road	Approximate Road Length (ft)	Road Material	Shorter Term / Preventive Maintenance	Selective Rehabilitation	Longer Term Rehabilitation
1	Bingham Lane	3,730	Asphalt	\$ 569,400	\$ 569,400	\$ 1,923,500
2	Bingham Road	5,280	Asphalt	\$ 1,694,800	\$ 1,694,800	\$ 3,484,900
3	Bristol Lane	4,100	Asphalt	N/A**	\$ 2,640,600	\$ 2,640,600
4	Bristol Ct.	1,535	Asphalt	N/A**	\$ 889,800	\$ 889,800
5	Britner Ct.	665	Asphalt	N/A**	\$ 424,800	\$ 424,800
6	Brooks Lane	660	Asphalt	\$ 113,100	\$ 113,100	\$ 328,900
7	Coachlight Lane	705	Concrete	\$ 163,600	\$ 163,600	\$ 299,900
8	Fromm Court	1,360	Asphalt	\$ 252,300	\$ 252,300	\$ 632,900
9	Hickory Hollow	880	Asphalt	\$ 224,800	\$ 224,800	\$ 490,500
10	Old Orchard Trail	2,535	Asphalt	\$ 384,900	\$ 384,900	\$ 1,161,300
11	Old Stage Road	845	Concrete	\$ 218,100	\$ 218,100	\$ 346,600
12	Sager Ct.	695	Asphalt	N/A**	\$ 418,600	\$ 418,600
13	Shagwood Drive	1,780	Asphalt	\$ 404,300	\$ 404,300	\$ 868,600
14	Timber Trail - Road	2,215	Asphalt	\$ 596,900	\$ 596,900	\$ 919,500
14b	Timber Trail - Path *	2,215	Asphalt	\$ 325,400.00		N/A
Total:		26,985	N/A		\$ 8,996,000.00	\$ 14,830,400.00

* Road Length and Costs for Timber Trail Path alternative, not included in the Totals at the bottom of the table.

** Short Term/Preventative Maintenance not recommended due to existing soils and road condition.

Estimate Number	Road	Approximate Road Length (ft)	Road Material	Shorter Term / Preventive Maintenance	Longer Term Rehabilitation
1	Bingham Lane	3,730	Asphalt	Crack sealing, surface seal, ditch cleanout	HMA Rehab 5", underdrain, drainage improvements
2	Bingham Road	5,280	Asphalt	HMA resurfacing 2", ditch cleanout crack treatment, FD repairs	HMA Rehab 6", underdrain, drainage improvements, curb
3	Bristol Lane *	4,100	Asphalt	Not Recommended	HMA Rehab 5", underdrain, drainage improvements
4	Bristol Ct.	1,535	Asphalt	Not Recommended	HMA Rehab 5", underdrain, drainage improvements
5	Britner Ct.	665	Asphalt	Not Recommended	HMA Rehab 5", underdrain, drainage improvements
6	Brooks Lane	660	Asphalt	Crack sealing, slurry seal, ditch cleanout	HMA Rehab 4", underdrain, drainage improvements
7	Coachlight Lane	705	Concrete	Full Depth Concrete Repairs (smaller scope)	Full Depth Concrete Repairs (expanded scope)
8	Fromm Court	1,360	Asphalt	Crack sealing, cape seal, drainage improvements	HMA Rehab 4", underdrain, drainage improvements
9	Hickory Hollow	880	Asphalt	HMA resurfacing 2", ditch cleanout crack treatment	HMA Rehab 5", underdrain, drainage improvements
10	Old Orchard Trail	2,535	Asphalt	Crack sealing, slurry seal, ditch cleanout	HMA Rehab 4", underdrain, drainage improvements
11	Old Stage Road	845	Concrete	Full Depth Concrete Repairs (smaller scope)	Full Depth Concrete Repairs (expanded scope)
12	Sager Ct.	695	Asphalt	Not Recommended	HMA Rehab 5", underdrain, drainage improvements
13	Shagwood Drive	1,780	Asphalt	HMA resurfacing 2", ditch cleanout crack treatment	HMA Rehab 5", underdrain, drainage improvements
14	Timber Trail - Road	2,215	Asphalt	HMA Crush & Shape + 3" resurfacing, drainage	HMA Rehab 4", underdrain, drainage improvements
14b	Timber Trail - Path **	2,215	Asphalt	HMA Crush & Shape + 2", Ditch Cleanout	
Total:		26,985			



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 1

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BINGHAM LANE
WORK: **CRACK SEALING, SURFACE SEAL, DITCH CLEANOUT**
DITCH CLEANOUT (ASSUME 20%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 17,000.00	= \$ 17,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 3,000.00	= \$ 3,000.00
3	Crack Sealing, HMA Pavement	0.706 Mile	@	\$ 25,000.00	= \$ 17,650.00
5	HMA Surface, Rem	862 SYD	@	\$ 10.00	= \$ 8,620.00
6	HMA Surface, Rem, Driveway Approach	145 SYD	@	\$ 10.00	= \$ 1,450.00
7	Conc Pavt, Rem, Driveway Approach	20 SYD	@	\$ 30.00	= \$ 600.00
8	Stone, Rem, Driveway Approach	20 SYD	@	\$ 50.00	= \$ 1,000.00
9	Brick Paver, Rem, Driveway	20 SYD	@	\$ 70.00	= \$ 1,400.00
10	Butt Joint	765 LFT	@	\$ 10.00	= \$ 7,650.00
11	Station Grading	- STA	@	\$ 3,000.00	= \$ -
12	Subgrade Undercutting, Type II, Special (As Needed)	287 CYD	@	\$ 40.00	= \$ 11,490.00
13	Large Aperture Geogrid (As Needed)	862 SYD	@	\$ 10.00	= \$ 8,620.00
14	Aggregate Base, 21AA, Special (As Needed)	181 TON	@	\$ 40.00	= \$ 7,240.00
15	1" x 3" Crushed Concrete, Special (As Needed)	259 TON	@	\$ 25.00	= \$ 6,470.00
16	Ditch Cleanout/Reestablishment (As Needed)	7.5 STA	@	\$ 1,000.00	= \$ 7,500.00
17	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00	= \$ -
18	Underdrain, Cleanout	- EA	@	\$ 4,000.00	= \$ -
19	Aggregate Base, 21AA, Special	- TON	@	\$ 40.00	= \$ -
20	Slurry Seal	8,620 SYD	@	\$ 5.00	= \$ 43,100.00
21	HMA, 5EML	71 TON	@	\$ 195.00	= \$ 13,870.00
22	HMA, 4EML	119 TON	@	\$ 180.00	= \$ 21,330.00
23	HMA, 5EML, RCOC Approach	10 TON	@	\$ 195.00	= \$ 1,930.00
24	HMA, 4EML, RCOC Approach	35 TON	@	\$ 180.00	= \$ 6,240.00
25	HMA, 5EML, Driveway Approach	17 TON	@	\$ 195.00	= \$ 3,300.00
26	HMA, 4EML, Driveway Approach	28 TON	@	\$ 180.00	= \$ 5,070.00
27	Structure, Adjust	16 EA	@	\$ 1,000.00	= \$ 16,000.00
28	Structure, Reconstruct	8 EA	@	\$ 2,500.00	= \$ 20,000.00
29	Maintenance Gravel/Millings (As Needed)	125 TON	@	\$ 30.00	= \$ 3,750.00
30	Miscellaneous Drainage Improvements	1 LS	@	\$ 75,000.00	= \$ 75,000.00
31	Site Restoration	4,636 SYD	@	\$ 7.00	= \$ 32,450.00
32	Soil Erosion and Sedimentation Control	1 LS	@	\$ 6,000.00	= \$ 6,000.00
33	Street Sign, Artistic, Special	2 EA	@	\$ 600.00	= \$ 1,200.00
34	Maintaining Traffic	1 LS	@	\$ 15,500.00	= \$ 15,500.00
SUBTOTAL					\$ 364,400.00
Construction Contingency (25%)					\$ 91,100.00
TOTAL CONSTRUCTION					\$ 455,500.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 113,900.00
TOTAL PROJECT					\$ 569,400.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 1a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BINGHAM LANE
WORK: **HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
UNDERDRAIN (100% OF THE ROAD)
DITCH CLEANOUT (ASSUME 20%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 112,000.00	= \$ 112,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 3,000.00	= \$ 3,000.00
3	Cold Milling HMA, 4"	8,620 SYD	@	\$ 6.00	= \$ 51,720.00
4	HMA Surface, Rem, Driveway Approach	580 SYD	@	\$ 10.00	= \$ 5,800.00
5	Conc Pavt, Rem, Driveway Approach	80 SYD	@	\$ 30.00	= \$ 2,400.00
6	Stone, Rem, Driveway Approach	60 SYD	@	\$ 50.00	= \$ 3,000.00
7	Brick Paver, Rem, Driveway	40 SYD	@	\$ 70.00	= \$ 2,800.00
8	Butt Joint	765 LFT	@	\$ 10.00	= \$ 7,650.00
9	Station Grading	37.5 STA	@	\$ 3,000.00	= \$ 112,500.00
10	Subgrade Undercutting, Type II, Special (As Needed)	287 CYD	@	\$ 40.00	= \$ 11,490.00
11	Large Aperture Geogrid (As Needed)	862 SYD	@	\$ 10.00	= \$ 8,620.00
12	Aggregate Base, 21AA, Special (As Needed)	181 TON	@	\$ 40.00	= \$ 7,240.00
13	1" x 3" Crushed Concrete, Special (As Needed)	259 TON	@	\$ 25.00	= \$ 6,470.00
14	Ditch Cleanout/Reestablishment (As Needed)	7.5 STA	@	\$ 1,000.00	= \$ 7,500.00
15	Underdrain, Subgrade, Open-Graded, 6-inch, Special	7,510 LFT	@	\$ 25.00	= \$ 187,750.00
16	Underdrain, Cleanout	20 EA	@	\$ 4,000.00	= \$ 80,000.00
17	Aggregate Base, 21AA, Special	492 TON	@	\$ 30.00	= \$ 14,770.00
18	HMA, 5EML	938 TON	@	\$ 175.00	= \$ 164,200.00
19	HMA, 4EML	1,407 TON	@	\$ 160.00	= \$ 225,190.00
20	HMA, 5EML, RCOC Approach	10 TON	@	\$ 195.00	= \$ 1,930.00
21	HMA, 4EML, RCOC Approach	35 TON	@	\$ 180.00	= \$ 6,240.00
22	HMA, 5EML, Driveway Approach	84 TON	@	\$ 195.00	= \$ 16,300.00
23	HMA, 4EML, Driveway Approach	125 TON	@	\$ 180.00	= \$ 22,570.00
24	Structure, Adjust	16 EA	@	\$ 1,000.00	= \$ 16,000.00
25	Structure, Reconstruct	8 EA	@	\$ 2,500.00	= \$ 20,000.00
26	Maintenance Gravel/Millings (As Needed)	125 TON	@	\$ 30.00	= \$ 3,750.00
27	Miscellaneous Drainage Improvements	1 LS	@	\$ 75,000.00	= \$ 75,000.00
28	Site Restoration	4,636 SYD	@	\$ 7.00	= \$ 32,450.00
29	Soil Erosion and Sedimentation Control	1 LS	@	\$ 6,000.00	= \$ 6,000.00
30	Street Sign, Artistic, Special	2 EA	@	\$ 600.00	= \$ 1,200.00
31	Maintaining Traffic	1 LS	@	\$ 15,500.00	= \$ 15,500.00
SUBTOTAL					\$ 1,231,000.00
Construction Contingency (25%)					\$ 307,800.00
TOTAL CONSTRUCTION					\$ 1,538,800.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 384,700.00
TOTAL PROJECT					\$ 1,923,500.00



PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 2

555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BINGHAM ROAD
WORK: HMA RESURFACING 2", DITCH CLEANOUT CRACK TREATMENT, FD REPAIRS
DITCH CLEANOUT (ASSUME 30%)
LEAVE HMA CURB IN PLACE, GUARDRAIL IMPROVEMENTS

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev Unit Price	Rev Total
1	Mobilization	1 LS @	\$ 51,000.00 =	\$ 51,000.00
2	Color Audio-Video Route Survey	1 LS @	\$ 4,000.00 =	\$ 4,000.00
3	Cold Mill HMA, 2"	13,200 SYD @	\$ 4.00 =	\$ 52,800.00
4	Crack Repair, Det 7	500 Ft @	\$ 25.00 =	\$ 12,500.00
5	HMA Surface, Rem	1,980 SYD @	\$ 10.00 =	\$ 19,800.00
6	HMA Surface, Rem, Driveway Approach	700 SYD @	\$ 10.00 =	\$ 7,000.00
7	HMA Curb, Rem	450 LFT @	\$ 5.00 =	\$ 2,250.00
8	Butt Joint	965 LFT @	\$ 10.00 =	\$ 9,650.00
9	Station Grading	- STA @	\$ 3,000.00 =	\$ -
10	Subgrade Undercutting, Type II, Special (As Needed)	659 CYD @	\$ 40.00 =	\$ 26,370.00
11	Large Aperture Geogrid (As Needed)	1,980 SYD @	\$ 10.00 =	\$ 19,800.00
12	Aggregate Base, 21AA, Special (As Needed)	416 TON @	\$ 40.00 =	\$ 16,630.00
13	1" x 3" Crushed Concrete, Special (As Needed)	594 TON @	\$ 25.00 =	\$ 14,850.00
14	Ditch Cleanout/Reestablishment (As Needed)	32.5 STA @	\$ 1,000.00 =	\$ 32,500.00
15	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT @	\$ 25.00 =	\$ -
16	Underdrain, Cleanout	- EA @	\$ 4,000.00 =	\$ -
17	Aggregate Base, 21AA, Special	208 TON @	\$ 40.00 =	\$ 8,320.00
18	HMA, 5EML	1,537 TON @	\$ 180.00 =	\$ 276,650.00
19	HMA, 4EML	269 TON @	\$ 180.00 =	\$ 48,420.00
20	HMA, 5EML, RCOC Approach	55 TON @	\$ 195.00 =	\$ 10,680.00
21	HMA, 4EML, RCOC Approach	192 TON @	\$ 180.00 =	\$ 34,510.00
22	HMA, 5EML, Driveway Approach	64 TON @	\$ 195.00 =	\$ 12,390.00
23	HMA, 4EML, Driveway Approach	106 TON @	\$ 180.00 =	\$ 19,060.00
24	Curb and Gutter, Conc, Det F4	450 LFT @	\$ 40.00 =	\$ 18,000.00
25	Structure, Adjust	22 EA @	\$ 1,000.00 =	\$ 22,000.00
26	Structure, Reconstruct	11 EA @	\$ 2,500.00 =	\$ 27,500.00
27	Maintenance Gravel/Millings (As Needed)	250 TON @	\$ 30.00 =	\$ 7,500.00
28	Bridge/Culvert Repair	1 LS @	\$ 75,000.00 =	\$ 75,000.00
29	Miscellaneous Guardrail Improvements	1 LS @	\$ 48,000.00 =	\$ 48,000.00
30	Miscellaneous Drainage Improvements	1 LS @	\$ 120,000.00 =	\$ 120,000.00
31	Site Restoration	1 LS @	\$ 45,000.00 =	\$ 45,000.00
32	Soil Erosion and Sedimentation Control	1 LS @	\$ 11,000.00 =	\$ 11,000.00
33	Street Sign, Artistic, Special	5 EA @	\$ 600.00 =	\$ 3,000.00
34	Maintaining Traffic	1 LS @	\$ 22,500.00 =	\$ 22,500.00
SUBTOTAL - ROAD REHABILITATION				\$ 1,078,700.00
35	Sharrow Symbol	10 EA @	\$ 200.00 =	\$ 2,000.00
36	Share The Road & Bike Sign	113 SFT @	\$ 20.00 =	\$ 2,250.00
37	Sign Post, 3 lb.	160 LFT @	\$ 10.00 =	\$ 1,600.00
SUBTOTAL - SHARED ROAD ALTERNATIVE				\$ 5,900.00
Construction Contingency (25%)				\$ 271,200.00
TOTAL CONSTRUCTION				\$ 1,355,800.00
Engineering, Survey, Geotechnical, Permitting (25%)				\$ 339,000.00
TOTAL PROJECT				\$ 1,694,800.00



PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 2a

555 Hulet Drive

Bloomfield Hills, MI 48302

P: (248) 454-6300 - F: (248) 454-6312

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BINGHAM ROAD
WORK: **HMA REHAB 6", UNDERDRAIN, DRAINAGE IMPROVEMENTS, CURB**
UNDERDRAIN (50% OF THE ROAD) AND DITCH CLEANOUT (ASSUME 30%)
BIT CURB REMOVAL AND REPLACEMENT W/ CONCRETE CURB, GUARDRAIL IMPROVEMENTS

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev Unit Price	Rev Total
1	Mobilization	1 LS	@ \$ 106,000.00 = \$	106,000.00
2	Color Audio-Video Route Survey	1 LS	@ \$ 4,000.00 = \$	4,000.00
3	HMA Surface, Rem	13,200 SYD	@ \$ 6.00 = \$	79,200.00
4	HMA Surface, Rem, Driveway Approach	700 SYD	@ \$ 10.00 = \$	7,000.00
5	HMA Curb, Rem	1,800 LFT	@ \$ 5.00 = \$	9,000.00
6	Butt Joint	965 LFT	@ \$ 10.00 = \$	9,650.00
7	Station Grading	54 STA	@ \$ 3,000.00 = \$	162,000.00
8	Subgrade Undercutting, Type II, Special (As Needed)	659 CYD	@ \$ 40.00 = \$	26,370.00
9	Large Aperture Geogrid (As Needed)	1,980 SYD	@ \$ 10.00 = \$	19,800.00
10	Aggregate Base, 21AA, Special (As Needed)	416 TON	@ \$ 40.00 = \$	16,630.00
11	1" x 3" Crushed Concrete, Special (As Needed)	594 TON	@ \$ 25.00 = \$	14,850.00
12	Ditch Cleanout/Reestablishment (As Needed)	32.5 STA	@ \$ 1,000.00 = \$	32,500.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	10,800 LFT	@ \$ 25.00 = \$	270,000.00
14	Underdrain, Cleanout	28 EA	@ \$ 4,000.00 = \$	112,000.00
15	Aggregate Base, 21AA, Special	1,386 TON	@ \$ 40.00 = \$	55,440.00
16	HMA, 5EML	1,537 TON	@ \$ 175.00 = \$	268,960.00
17	HMA, 4EML	3,074 TON	@ \$ 160.00 = \$	491,820.00
18	HMA, 5EML, RCOC Approach	55 TON	@ \$ 195.00 = \$	10,680.00
19	HMA, 4EML, RCOC Approach	192 TON	@ \$ 180.00 = \$	34,510.00
20	HMA, 5EML, Driveway Approach	64 TON	@ \$ 195.00 = \$	12,390.00
21	HMA, 4EML, Driveway Approach	106 TON	@ \$ 180.00 = \$	19,060.00
22	Curb and Gutter, Conc, Det F4	2,400 LFT	@ \$ 35.00 = \$	84,000.00
23	Structure, Adjust	22 EA	@ \$ 1,000.00 = \$	22,000.00
24	Structure, Reconstruct	11 EA	@ \$ 2,500.00 = \$	27,500.00
25	Maintenance Gravel/Millings (As Needed)	250 TON	@ \$ 30.00 = \$	7,500.00
26	Bridge/Culvert Repair	1 LS	@ \$ 75,000.00 = \$	75,000.00
27	Miscellaneous Guardrail Improvements	1 LS	@ \$ 48,000.00 = \$	48,000.00
28	Miscellaneous Drainage Improvements	1 LS	@ \$ 120,000.00 = \$	120,000.00
29	Site Restoration	1 LS	@ \$ 45,000.00 = \$	45,000.00
30	Soil Erosion and Sedimentation Control	1 LS	@ \$ 11,000.00 = \$	11,000.00
31	Street Sign, Artistic, Special	EA	@ \$ 600.00 = \$	-
32	Maintaining Traffic	1 LS	@ \$ 22,500.00 = \$	22,500.00
SUBTOTAL - ROAD REHABILITATION				\$ 2,224,400.00
33	Sharrow Symbol	10 EA	@ \$ 200.00 = \$	2,000.00
34	Share The Road & Bike Sign	113 SFT	@ \$ 20.00 = \$	2,250.00
35	Sign Post, 3 lb.	160 LFT	@ \$ 10.00 = \$	1,600.00
SUBTOTAL - SHARED ROAD ALTERNATIVE				\$ 5,900.00
Construction Contingency (25%)				\$ 557,600.00
TOTAL CONSTRUCTION				\$ 2,787,900.00
Engineering, Survey, Geotechnical, Permitting (25%)				\$ 697,000.00
TOTAL PROJECT				\$ 3,484,900.00



PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 3

555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BRISTOL LANE
WORK: HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS
UNDERDRAIN (ASSUME 50% OF THE ROAD) AND DITCH CLEANOUT (ASSUME 30%)
BIT CURB REMOVAL AND REPLACEMENT W/ CONCRETE CURB, GUARDRAIL IMPROVEMENTS

DATE: November 17, 2023
PROJECT #: 20190463
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 80,000.00	= \$ 80,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 5,500.00	= \$ 5,500.00
3	HMA Surface, Rem	10,200 SYD	@	\$ 6.00	= \$ 61,200.00
5	HMA Surface, Rem, Driveway Approach	700 SYD	@	\$ 10.00	= \$ 7,000.00
6	Butt Joint	1,275 LFT	@	\$ 10.00	= \$ 12,750.00
7	Station Grading	41 STA	@	\$ 3,000.00	= \$ 123,000.00
8	Subgrade Undercutting, Type II, Special (As Needed)	510 CYD	@	\$ 40.00	= \$ 20,400.00
9	Large Aperture Geogrid (As Needed)	1,530 SYD	@	\$ 10.00	= \$ 15,300.00
10	Aggregate Base, 21AA, Special (As Needed)	321 TON	@	\$ 40.00	= \$ 12,850.00
11	1" x 3" Crushed Concrete, Special (As Needed)	459 TON	@	\$ 25.00	= \$ 11,480.00
12	Ditch Cleanout/Reestablishment (As Needed)	20 STA	@	\$ 1,000.00	= \$ 20,000.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	12,500 LFT	@	\$ 25.00	= \$ 312,500.00
14	Underdrain, Cleanout	26 EA	@	\$ 4,000.00	= \$ 104,000.00
15	Aggregate Base, 21AA, Special	1,071 TON	@	\$ 40.00	= \$ 42,840.00
16	HMA, 5EML	1,221 TON	@	\$ 175.00	= \$ 213,760.00
18	HMA, 5EML, RCOC Approach	12 TON	@	\$ 195.00	= \$ 2,250.00
19	HMA, 5EML, Driveway Approach	64 TON	@	\$ 195.00	= \$ 12,390.00
20	HMA, 4EML	1,832 TON	@	\$ 160.00	= \$ 293,160.00
22	HMA, 4EML, RCOC Approach	40 TON	@	\$ 180.00	= \$ 7,280.00
23	HMA, 4EML, Driveway Approach	106 TON	@	\$ 180.00	= \$ 19,060.00
24	Structure, Adjust	14 EA	@	\$ 1,000.00	= \$ 14,000.00
25	Structure, Reconstruct	7 EA	@	\$ 2,500.00	= \$ 17,500.00
26	Maintenance Gravel/Millings (As Needed)	250 TON	@	\$ 30.00	= \$ 7,500.00
27	Miscellaneous Drainage Improvements	1 LS	@	\$ 175,000.00	= \$ 175,000.00
28	Site Restoration	1 LS	@	\$ 60,000.00	= \$ 60,000.00
29	Soil Erosion and Sedimentation Control	1 LS	@	\$ 6,000.00	= \$ 6,000.00
30	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
31	Maintaining Traffic	1 LS	@	\$ 28,000.00	= \$ 28,000.00
SUBTOTAL - ROAD REHABILITATION					\$ 1,685,300.00
32	Sharrow Symbol	8 EA	@	\$ 200.00	= \$ 1,600.00
33	Share The Road & Bike Sign	90 SFT	@	\$ 20.00	= \$ 1,800.00
34	Sign Post, 3 lb.	128 LFT	@	\$ 10.00	= \$ 1,280.00
SUBTOTAL - SHARED ROAD ALTERNATIVE					\$ 4,700.00
Construction Contingency (25%)					\$ 422,500.00
TOTAL CONSTRUCTION					\$ 2,112,500.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 528,100.00
TOTAL PROJECT					\$ 2,640,600.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 4

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BRISTOL CT
WORK: HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS
100% UNDERDRAIN
DITCH CLEANOUT (ASSUME 50%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 27,000.00	= \$ 27,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Cold Milling HMA, 4"	3,535 SYD	@	\$ 6.00	= \$ 21,210.00
4	HMA Surface, Rem	707 SYD	@	\$ 10.00	= \$ 7,070.00
5	HMA Surface, Rem, Driveway Approach	120 SYD	@	\$ 10.00	= \$ 1,200.00
6	Conc Pavt, Rem, Driveway Approach	80 SYD	@	\$ 30.00	= \$ 2,400.00
7	Butt Joint	- LFT	@	\$ 10.00	= \$ -
8	Station Grading	16 STA	@	\$ 3,000.00	= \$ 48,000.00
9	Subgrade Undercutting, Type II, Special (As Needed)	90 CYD	@	\$ 40.00	= \$ 3,600.00
10	Large Aperture Geogrid (As Needed)	406 SYD	@	\$ 10.00	= \$ 4,060.00
11	Aggregate Base, 21AA, Special (As Needed)	98 TON	@	\$ 40.00	= \$ 3,920.00
12	1" x 3" Crushed Concrete, Special (As Needed)	140 TON	@	\$ 25.00	= \$ 3,500.00
13	Ditch Cleanout/Reestablishment (As Needed)	17 STA	@	\$ 1,000.00	= \$ 17,000.00
14	Underdrain, Subgrade, Open-Graded, 6-inch, Special	3,450 LFT	@	\$ 25.00	= \$ 86,250.00
15	Underdrain, Cleanout	14 EA	@	\$ 4,000.00	= \$ 56,000.00
16	Aggregate Base, 21AA, Special	371 TON	@	\$ 40.00	= \$ 14,850.00
17	HMA, 5EML	389 TON	@	\$ 175.00	= \$ 68,050.00
18	HMA, 4EML	583 TON	@	\$ 160.00	= \$ 93,320.00
19	HMA, 5EML, Driveway Approach	17 TON	@	\$ 195.00	= \$ 3,220.00
20	HMA, 4EML, Driveway Approach	28 TON	@	\$ 180.00	= \$ 4,950.00
21	Structure, Adjust	2 EA	@	\$ 1,000.00	= \$ 2,000.00
22	Structure, Reconstruct	3 EA	@	\$ 2,500.00	= \$ 7,500.00
23	Maintenance Gravel/Millings (As Needed)	58 TON	@	\$ 30.00	= \$ 1,740.00
24	Miscellaneous Drainage Improvements	1 LS	@	\$ 50,000.00	= \$ 50,000.00
25	Site Restoration	1 LS	@	\$ 20,000.00	= \$ 20,000.00
26	Soil Erosion and Sedimentation Control	1 LS	@	\$ 5,000.00	= \$ 5,000.00
27	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
28	Maintaining Traffic	1 LS	@	\$ 15,000.00	= \$ 15,000.00
SUBTOTAL					\$ 569,400.00
Construction Contingency (25%)					\$ 142,400.00
TOTAL CONSTRUCTION					\$ 711,800.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 178,000.00
TOTAL PROJECT					\$ 889,800.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 5

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BRITNER CT.
WORK: **HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
100% UNDERDRAIN
DITCH CLEANOUT (ASSUME 75%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 13,000.00 =	\$ 13,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
3	Cold Milling HMA, 4"	1,640 SYD	@	\$ 6.00 =	\$ 9,840.00
3	HMA Surface, Rem	246 SYD	@	\$ 10.00 =	\$ 2,460.00
4	HMA Surface, Rem, Driveway Approach	140 SYD	@	\$ 10.00 =	\$ 1,400.00
5	Conc Pavt, Rem, Driveway Approach	60 SYD	@	\$ 30.00 =	\$ 1,800.00
6	Butt Joint	- LFT	@	\$ 10.00 =	\$ -
7	Station Grading	7 STA	@	\$ 3,000.00 =	\$ 21,000.00
8	Subgrade Undercutting, Type II, Special (As Needed)	27 CYD	@	\$ 40.00 =	\$ 1,090.00
9	Large Aperture Geogrid (As Needed)	164 SYD	@	\$ 10.00 =	\$ 1,640.00
10	Aggregate Base, 21AA, Special (As Needed)	34 TON	@	\$ 40.00 =	\$ 1,380.00
11	1" x 3" Crushed Concrete, Special (As Needed)	49 TON	@	\$ 25.00 =	\$ 1,230.00
12	Ditch Cleanout/Reestablishment (As Needed)	7.65 STA	@	\$ 1,000.00 =	\$ 7,650.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	1,330 LFT	@	\$ 25.00 =	\$ 33,250.00
14	Underdrain, Cleanout	6 EA	@	\$ 4,000.00 =	\$ 24,000.00
15	Aggregate Base, 21AA, Special	172 TON	@	\$ 40.00 =	\$ 6,890.00
16	HMA, 5EML	180 TON	@	\$ 175.00 =	\$ 31,570.00
17	HMA, 4EML	271 TON	@	\$ 160.00 =	\$ 43,300.00
18	HMA, 5EML, Driveway Approach	17 TON	@	\$ 195.00 =	\$ 3,220.00
19	HMA, 4EML, Driveway Approach	28 TON	@	\$ 180.00 =	\$ 4,950.00
20	Structure, Adjust	2 EA	@	\$ 1,000.00 =	\$ 2,000.00
21	Structure, Reconstruct	1 EA	@	\$ 2,500.00 =	\$ 2,500.00
22	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00 =	\$ 1,500.00
23	Miscellaneous Drainage Improvements	1 LS	@	\$ 35,000.00 =	\$ 35,000.00
24	Site Restoration	1 LS	@	\$ 10,000.00 =	\$ 10,000.00
25	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
26	Street Sign, Artistic, Special	1 EA	@	\$ 600.00 =	\$ 600.00
27	Maintaining Traffic	1 LS	@	\$ 6,000.00 =	\$ 6,000.00
SUBTOTAL					\$ 271,800.00
Construction Contingency (25%)					\$ 68,000.00
TOTAL CONSTRUCTION					\$ 339,800.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 85,000.00
TOTAL PROJECT					\$ 424,800.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 6

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BROOKS LANE
WORK: **CRACK SEALING, SLURRY SEAL, DITCH CLEANOUT**
LIMITED FULL DEPTH REPAIRS, DITCH & DRAINAGE IMPROVEMENTS

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 3,000.00 =	\$ 3,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
3	Crack Sealing, HMA Pavement	0.125 Mile	@	\$ 25,000.00 =	\$ 3,130.00
4	HMA Surface, Rem	26 SYD	@	\$ 10.00 =	\$ 260.00
5	HMA Surface, Rem, Driveway Approach	- SYD	@	\$ 20.00 =	\$ -
6	Conc Pavt, Rem, Driveway Approach	- SYD	@	\$ 20.00 =	\$ -
7	Stone, Rem, Driveway Approach	- SYD	@	\$ 20.00 =	\$ -
8	Butt Joint	- LFT	@	\$ 10.00 =	\$ -
9	Station Grading	- STA	@	\$ 3,000.00 =	\$ -
10	Subgrade Undercutting, Type II, Special (As Needed)	9 CYD	@	\$ 40.00 =	\$ 350.00
11	Large Aperture Geogrid (As Needed)	26 SYD	@	\$ 10.00 =	\$ 260.00
12	Aggregate Base, 21AA, Special (As Needed)	5 TON	@	\$ 40.00 =	\$ 220.00
13	1" x 3" Crushed Concrete, Special (As Needed)	8 TON	@	\$ 25.00 =	\$ 200.00
14	Ditch Cleanout/Reestablishment (As Needed)	1 STA	@	\$ 1,000.00 =	\$ 1,000.00
15	Slurry Seal	1,045 SYD	@	\$ 5.00 =	\$ 5,230.00
16	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00 =	\$ -
17	Underdrain, Cleanout	- EA	@	\$ 4,000.00 =	\$ -
18	Aggregate Base, 21AA, Special	3 TON	@	\$ 40.00 =	\$ 110.00
19	HMA, 5EML	2.2 TON	@	\$ 195.00 =	\$ 420.00
20	HMA, 4EML	3.6 TON	@	\$ 180.00 =	\$ 650.00
21	HMA, 5EML, Driveway Approach	- TON	@	\$ 195.00 =	\$ -
22	HMA, 4EML, Driveway Approach	- TON	@	\$ 180.00 =	\$ -
23	Structure, Adjust	3 EA	@	\$ 1,000.00 =	\$ 3,000.00
24	Structure, Reconstruct	1 EA	@	\$ 2,500.00 =	\$ 2,500.00
25	Maintenance Gravel/Millings (As Needed)	25 TON	@	\$ 30.00 =	\$ 750.00
26	Miscellaneous Drainage Improvements	1 LS	@	\$ 25,000.00 =	\$ 25,000.00
27	Site Restoration	1,742 SYD	@	\$ 7.00 =	\$ 12,200.00
28	Soil Erosion and Sedimentation Control	1 LS	@	\$ 4,000.00 =	\$ 4,000.00
29	Street Sign, Artistic, Special	1 EA	@	\$ 600.00 =	\$ 600.00
30	Maintaining Traffic	1 LS	@	\$ 7,500.00 =	\$ 7,500.00
SUBTOTAL					\$ 72,400.00
Construction Contingency (25%)					\$ 18,100.00
TOTAL CONSTRUCTION					\$ 90,500.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 22,600.00
TOTAL PROJECT					\$ 113,100.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 6a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: BROOKS LANE
WORK: **HMA REHAB 4", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
UNDERDRAIN (100% OF THE ROAD)
DITCH CLEANOUT (ASSUME 15%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 10,000.00 =	\$ 10,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
3	Crack Sealing, HMA Pavement	0.000 Mile	@	\$ 25,000.00 =	\$ -
4	Cold Milling HMA, 3"	1,045 SYD	@	\$ 6.00 =	\$ 6,270.00
5	HMA Surface, Rem	105 SYD	@	\$ 10.00 =	\$ 1,050.00
6	HMA Surface, Rem, Driveway Approach	220 SYD	@	\$ 10.00 =	\$ 2,200.00
7	Conc Pavt, Rem, Driveway Approach	60 SYD	@	\$ 30.00 =	\$ 1,800.00
8	Stone, Rem, Driveway Approach	40 SYD	@	\$ 50.00 =	\$ 2,000.00
9	Butt Joint	300 LFT	@	\$ 10.00 =	\$ 3,000.00
10	Station Grading	6.6 STA	@	\$ 3,000.00 =	\$ 19,800.00
11	Subgrade Undercutting, Type II, Special (As Needed)	35 CYD	@	\$ 40.00 =	\$ 1,390.00
12	Large Aperture Geogrid (As Needed)	105 SYD	@	\$ 10.00 =	\$ 1,050.00
13	Aggregate Base, 21AA, Special (As Needed)	22 TON	@	\$ 40.00 =	\$ 880.00
14	1" x 3" Crushed Concrete, Special (As Needed)	31 TON	@	\$ 25.00 =	\$ 780.00
15	Ditch Cleanout/Reestablishment (As Needed)	1 STA	@	\$ 1,000.00 =	\$ 1,000.00
16	Slurry Seal	0 SYD	@	\$ 5.00 =	\$ -
17	Underdrain, Subgrade, Open-Graded, 6-inch, Special	1,070 LFT	@	\$ 25.00 =	\$ 26,750.00
18	Underdrain, Cleanout	5 EA	@	\$ 4,000.00 =	\$ 20,000.00
19	Aggregate Base, 21AA, Special	11 TON	@	\$ 40.00 =	\$ 440.00
20	HMA, 5EML	88 TON	@	\$ 175.00 =	\$ 15,430.00
21	HMA, 4EML	147 TON	@	\$ 160.00 =	\$ 23,510.00
22	HMA, 5EML, Driveway Approach	26 TON	@	\$ 195.00 =	\$ 5,150.00
23	HMA, 4EML, Driveway Approach	44 TON	@	\$ 180.00 =	\$ 7,920.00
24	Structure, Adjust	3 EA	@	\$ 1,000.00 =	\$ 3,000.00
25	Structure, Reconstruct	2 EA	@	\$ 2,500.00 =	\$ 5,000.00
26	Maintenance Gravel/Millings (As Needed)	25 TON	@	\$ 30.00 =	\$ 750.00
27	Miscellaneous Drainage Improvements	1 LS	@	\$ 25,000.00 =	\$ 25,000.00
28	Site Restoration	1,742 SYD	@	\$ 7.00 =	\$ 12,200.00
29	Soil Erosion and Sedimentation Control	1 LS	@	\$ 4,000.00 =	\$ 4,000.00
30	Street Sign, Artistic, Special	1 EA	@	\$ 600.00 =	\$ 600.00
31	Maintaining Traffic	1 LS	@	\$ 7,500.00 =	\$ 7,500.00
SUBTOTAL					\$ 210,500.00
Construction Contingency (25%)					\$ 52,600.00
TOTAL CONSTRUCTION					\$ 263,100.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 65,800.00
TOTAL PROJECT					\$ 328,900.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 7

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: COACHLIGHT LANE
WORK: **FULL DEPTH CONCRETE REPAIRS (SMALLER SCOPE)**
AS-NEEDED CURB AND GUTTER

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 5,000.00 =	\$ 5,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
3	Concrete Pavt, Rem	328 SYD	@	\$ 30.00 =	\$ 9,830.00
4	Concrete Pavt, Rem, Driveway Approach	40 SYD	@	\$ 30.00 =	\$ 1,200.00
5	Curb and Gutter, Rem	246 LFT	@	\$ 9.00 =	\$ 2,210.00
6	Station Grading	7 STA	@	\$ 1,500.00 =	\$ 10,580.00
7	Subgrade Undercutting, Type II, Special (As Needed)	123 CYD	@	\$ 40.00 =	\$ 4,900.00
8	Large Aperture Geogrid (As Needed)	368 SYD	@	\$ 10.00 =	\$ 3,680.00
9	Aggregate Base, 21AA, Special (As Needed)	77 TON	@	\$ 40.00 =	\$ 3,090.00
10	1" x 3" Crushed Concrete, Special (As Needed)	110 TON	@	\$ 25.00 =	\$ 2,760.00
11	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00 =	\$ -
12	Underdrain, Cleanout	- EA	@	\$ 4,000.00 =	\$ -
13	Aggregate Base, 21AA, Special	34 TON	@	\$ 40.00 =	\$ 1,380.00
14	Driveway, Nonreinforced Conc, 6 inch	40 SYD	@	\$ 60.00 =	\$ 2,400.00
15	Conc Pavt, 8 inch	328 SYD	@	\$ 75.00 =	\$ 24,580.00
16	Curb and Gutter, Conc, Det D3	246 LFT	@	\$ 40.00 =	\$ 9,830.00
17	Structure, Adjust	2 EA	@	\$ 1,000.00 =	\$ 2,000.00
18	Structure, Reconstruct	1 EA	@	\$ 2,500.00 =	\$ 2,500.00
19	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00 =	\$ 1,500.00
20	Site Restoration	235 SYD	@	\$ 7.00 =	\$ 1,650.00
21	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
22	Street Sign, Artistic, Special	1 EA	@	\$ 600.00 =	\$ 600.00
23	Maintaining Traffic	1 LS	@	\$ 10,000.00 =	\$ 10,000.00
SUBTOTAL					\$ 104,700.00
Construction Contingency (25%)					\$ 26,200.00
TOTAL CONSTRUCTION					\$ 130,900.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 32,700.00
TOTAL PROJECT					\$ 163,600.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 7a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: COACHLIGHT LANE
WORK: **FULL DEPTH CONCRETE REPAIRS (EXPANDED SCOPE)**
AS-NEEDED CURB AND GUTTER

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 9,000.00 =	\$ 9,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
3	Concrete Pavt, Rem	656 SYD	@	\$ 30.00 =	\$ 19,670.00
4	Concrete Pavt, Rem, Driveway Approach	100 SYD	@	\$ 30.00 =	\$ 3,000.00
5	Curb and Gutter, Rem	492 LFT	@	\$ 9.00 =	\$ 4,420.00
6	Station Grading	7 STA	@	\$ 1,500.00 =	\$ 10,580.00
7	Subgrade Undercutting, Type II, Special (As Needed)	252 CYD	@	\$ 40.00 =	\$ 10,070.00
8	Large Aperture Geogrid (As Needed)	756 SYD	@	\$ 10.00 =	\$ 7,560.00
9	Aggregate Base, 21AA, Special (As Needed)	158 TON	@	\$ 40.00 =	\$ 6,340.00
10	1" x 3" Crushed Concrete, Special (As Needed)	227 TON	@	\$ 25.00 =	\$ 5,670.00
11	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00 =	\$ -
12	Underdrain, Cleanout	- EA	@	\$ 4,000.00 =	\$ -
13	Aggregate Base, 21AA, Special	69 TON	@	\$ 40.00 =	\$ 2,750.00
14	Driveway, Nonreinforced Conc, 6 inch	100 SYD	@	\$ 60.00 =	\$ 6,000.00
15	Conc Pavt, 8 inch	656 SYD	@	\$ 75.00 =	\$ 49,160.00
16	Curb and Gutter, Conc, Det D3	492 LFT	@	\$ 40.00 =	\$ 19,670.00
17	Structure, Adjust	2 EA	@	\$ 1,000.00 =	\$ 2,000.00
18	Structure, Reconstruct	1 EA	@	\$ 2,500.00 =	\$ 2,500.00
19	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00 =	\$ 1,500.00
20	Site Restoration	196 SYD	@	\$ 7.00 =	\$ 1,370.00
21	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
22	Street Sign, Artistic, Special	1 EA	@	\$ 600.00 =	\$ 600.00
23	Maintaining Traffic	1 LS	@	\$ 25,000.00 =	\$ 25,000.00
SUBTOTAL					\$ 191,900.00
Construction Contingency (25%)					\$ 48,000.00
TOTAL CONSTRUCTION					\$ 239,900.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 60,000.00
TOTAL PROJECT					\$ 299,900.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 8

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: FROMM CT.
WORK: **CRACK SEALING, CAPE SEAL, DRAINAGE IMPROVEMENTS**
DITCH CLEANOUT (ASSUME 15%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 8,000.00	= \$ 8,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,500.00	= \$ 2,500.00
3	Crack Sealing, HMA Pavement	0.419 Mile	@	\$ 25,000.00	= \$ 10,480.00
4	HMA Surface, Rem	311 SYD	@	\$ 10.00	= \$ 3,110.00
5	HMA Surface, Rem, Driveway Approach	80 SYD	@	\$ 10.00	= \$ 800.00
6	Conc Pavt, Rem, Driveway Approach	40 SYD	@	\$ 30.00	= \$ 1,200.00
7	Butt Joint	190 LFT	@	\$ 10.00	= \$ 1,900.00
8	Station Grading	- STA	@	\$ 3,000.00	= \$ -
9	Subgrade Undercutting, Type II, Special (As Needed)	104 CYD	@	\$ 40.00	= \$ 4,140.00
10	Large Aperture Geogrid (As Needed)	311 SYD	@	\$ 10.00	= \$ 3,110.00
11	Aggregate Base, 21AA, Special (As Needed)	65 TON	@	\$ 40.00	= \$ 2,610.00
12	1" x 3" Crushed Concrete, Special (As Needed)	93 TON	@	\$ 25.00	= \$ 2,330.00
13	Ditch Cleanout/Reestablishment (As Needed)	2 STA	@	\$ 1,000.00	= \$ 2,000.00
14	Cape Seal Surface	3,110 SYD	@	\$ 6.00	= \$ 18,660.00
14	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00	= \$ -
15	Underdrain, Cleanout	- EA	@	\$ 4,000.00	= \$ -
16	Aggregate Base, 21AA, Special	65 TON	@	\$ 40.00	= \$ 2,610.00
17	HMA, 5EML	18 TON	@	\$ 195.00	= \$ 3,560.00
18	HMA, 4EML	30 TON	@	\$ 180.00	= \$ 5,470.00
19	HMA, 5EML, RCOC Approach	10 TON	@	\$ 195.00	= \$ 1,930.00
20	HMA, 4EML, RCOC Approach	35 TON	@	\$ 180.00	= \$ 6,240.00
21	HMA, 5EML, Driveway Approach	10 TON	@	\$ 195.00	= \$ 1,930.00
22	HMA, 4EML, Driveway Approach	17 TON	@	\$ 180.00	= \$ 2,970.00
23	Structure, Adjust	6 EA	@	\$ 1,000.00	= \$ 6,000.00
24	Structure, Reconstruct	3 EA	@	\$ 2,500.00	= \$ 7,500.00
25	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00	= \$ 1,500.00
26	Miscellaneous Drainage Improvements	1 LS	@	\$ 25,000.00	= \$ 25,000.00
27	Site Restoration	3,609 SYD	@	\$ 7.00	= \$ 25,260.00
28	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
29	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
30	Maintaining Traffic	1 LS	@	\$ 7,500.00	= \$ 7,500.00
SUBTOTAL					\$ 161,400.00
Construction Contingency (25%)					\$ 40,400.00
TOTAL CONSTRUCTION					\$ 201,800.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 50,500.00
TOTAL PROJECT					\$ 252,300.00



PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 8a

555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: FROMM CT.
WORK: **HMA REHAB 4", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
UNDERDRAIN (100% OF THE ROAD)
DITCH CLEANOUT (ASSUME 15%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 19,000.00	= \$ 19,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Cold Milling HMA, 4"	3,110 SYD	@	\$ 6.00	= \$ 18,660.00
4	HMA Surface, Rem	311 SYD	@	\$ 10.00	= \$ 3,110.00
5	HMA Surface, Rem, Driveway Approach	320 SYD	@	\$ 10.00	= \$ 3,200.00
6	Conc Pavt, Rem, Driveway Approach	80 SYD	@	\$ 30.00	= \$ 2,400.00
7	Butt Joint	470 LFT	@	\$ 10.00	= \$ 4,700.00
8	Station Grading	13.6 STA	@	\$ 3,000.00	= \$ 40,800.00
9	Subgrade Undercutting, Type II, Special (As Needed)	104 CYD	@	\$ 40.00	= \$ 4,140.00
10	Large Aperture Geogrid (As Needed)	311 SYD	@	\$ 10.00	= \$ 3,110.00
11	Aggregate Base, 21AA, Special (As Needed)	65 TON	@	\$ 40.00	= \$ 2,610.00
12	1" x 3" Crushed Concrete, Special (As Needed)	93 TON	@	\$ 25.00	= \$ 2,330.00
13	Ditch Cleanout/Reestablishment (As Needed)	2 STA	@	\$ 1,000.00	= \$ 2,000.00
14	Underdrain, Subgrade, Open-Graded, 6-inch, Special	2,450 LFT	@	\$ 25.00	= \$ 61,250.00
15	Underdrain, Cleanout	6 EA	@	\$ 4,000.00	= \$ 24,000.00
16	Aggregate Base, 21AA, Special	33 TON	@	\$ 40.00	= \$ 1,310.00
17	HMA, 5EML	249 TON	@	\$ 175.00	= \$ 43,600.00
18	HMA, 4EML	415 TON	@	\$ 160.00	= \$ 66,440.00
19	HMA, 5EML, RCOC Approach	10 TON	@	\$ 195.00	= \$ 1,930.00
20	HMA, 4EML, RCOC Approach	35 TON	@	\$ 180.00	= \$ 6,240.00
21	HMA, 5EML, Driveway Approach	33 TON	@	\$ 195.00	= \$ 6,440.00
22	HMA, 4EML, Driveway Approach	55 TON	@	\$ 180.00	= \$ 9,900.00
23	Structure, Adjust	6 EA	@	\$ 1,000.00	= \$ 6,000.00
24	Structure, Reconstruct	3 EA	@	\$ 2,500.00	= \$ 7,500.00
25	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00	= \$ 1,500.00
26	Miscellaneous Drainage Improvements	1 LS	@	\$ 25,000.00	= \$ 25,000.00
27	Site Restoration	3,609 SYD	@	\$ 7.00	= \$ 25,260.00
28	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
29	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
30	Maintaining Traffic	1 LS	@	\$ 7,500.00	= \$ 7,500.00
SUBTOTAL					\$ 405,000.00
Construction Contingency (25%)					\$ 101,300.00
TOTAL CONSTRUCTION					\$ 506,300.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 126,600.00
TOTAL PROJECT					\$ 632,900.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 9

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: HICKORY HOLLOW
WORK: **HMA RESURFACING 2", DITCH CLEANOUT/CRACK TREATMENT**
FULL DEPTH REPAIRS AND CRACK TREATMENT
DRAINAGE IMPROVEMENTS, DITCH CLEANOUT (ASSUME 15%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 7,000.00	= \$ 7,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 1,500.00	= \$ 1,500.00
3	Cold Milling HMA, 2"	2,210 SYD	@	\$ 4.00	= \$ 8,840.00
4	Crack Repair, Det 7	250 ft	@	\$ 25.00	= \$ 6,250.00
5	HMA Surface, Rem	221 SYD	@	\$ 10.00	= \$ 2,210.00
6	HMA Surface, Rem, Driveway Approach	80 SYD	@	\$ 10.00	= \$ 800.00
7	Butt Joint	185 LFT	@	\$ 10.00	= \$ 1,850.00
8	Station Grading	- STA	@	\$ 3,000.00	= \$ -
9	Subgrade Undercutting, Type II, Special (As Needed)	74 CYD	@	\$ 40.00	= \$ 2,950.00
10	Large Aperture Geogrid (As Needed)	221 SYD	@	\$ 10.00	= \$ 2,210.00
11	Aggregate Base, 21AA, Special (As Needed)	46 TON	@	\$ 40.00	= \$ 1,860.00
12	1" x 3" Crushed Concrete, Special (As Needed)	93 TON	@	\$ 25.00	= \$ 2,320.00
13	Ditch Cleanout/Reestablishment (As Needed)	1.5 STA	@	\$ 1,000.00	= \$ 1,500.00
14	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00	= \$ -
15	Underdrain, Cleanout	- EA	@	\$ 4,000.00	= \$ -
16	Aggregate Base, 21AA, Special	- TON	@	\$ 40.00	= \$ -
17	HMA, 5EML	243 TON	@	\$ 180.00	= \$ 43,760.00
18	HMA, 4EML	24 TON	@	\$ 180.00	= \$ 4,380.00
19	HMA, 5EML, Driveway Approach	7 TON	@	\$ 195.00	= \$ 1,290.00
20	HMA, 4EML, Driveway Approach	11 TON	@	\$ 180.00	= \$ 1,980.00
21	Structure, Adjust	5 EA	@	\$ 1,000.00	= \$ 5,000.00
22	Structure, Reconstruct	2 EA	@	\$ 2,500.00	= \$ 5,000.00
23	Maintenance Gravel/Millings (As Needed)	30 TON	@	\$ 30.00	= \$ 900.00
24	Miscellaneous Drainage Improvements	1 LS	@	\$ 25,000.00	= \$ 25,000.00
25	Site Restoration	850 SYD	@	\$ 7.00	= \$ 5,950.00
26	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
27	Street Sign, Artistic, Special	2 EA	@	\$ 600.00	= \$ 1,200.00
28	Maintaining Traffic	1 LS	@	\$ 7,500.00	= \$ 7,500.00
SUBTOTAL					\$ 143,800.00
Construction Contingency (25%)					\$ 36,000.00
TOTAL CONSTRUCTION					\$ 179,800.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 45,000.00
TOTAL PROJECT					\$ 224,800.00



555 Hulet Drive
 Bloomfield Hills, MI 48302
 P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 9a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
 LOCATION: HICKORY HOLLOW
 WORK: **HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
 UNDERDRAIN (100% OF THE ROAD)
 DITCH CLEANOUT (ASSUME 15%)

DATE: November 17, 2023
 PROJECT #: 20220208
 ESTIMATOR: WJW
 CHECKED BY: BWS
 CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 15,000.00 =	\$ 15,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
3	Cold Milling HMA, 5"	2,210 SYD	@	\$ 6.00 =	\$ 13,260.00
4	HMA Surface, Rem	332 SYD	@	\$ 10.00 =	\$ 3,320.00
5	HMA Surface, Rem, Driveway Approach	220 SYD	@	\$ 10.00 =	\$ 2,200.00
6	Butt Joint	325 LFT	@	\$ 10.00 =	\$ 3,250.00
7	Station Grading	9 STA	@	\$ 3,000.00 =	\$ 27,000.00
8	Subgrade Undercutting, Type II, Special (As Needed)	17 CYD	@	\$ 40.00 =	\$ 660.00
9	Large Aperture Geogrid (As Needed)	50 SYD	@	\$ 10.00 =	\$ 500.00
10	Aggregate Base, 21AA, Special (As Needed)	10 TON	@	\$ 40.00 =	\$ 420.00
11	1" x 3" Crushed Concrete, Special (As Needed)	15 TON	@	\$ 25.00 =	\$ 370.00
12	Ditch Cleanout/Reestablishment (As Needed)	1.5 STA	@	\$ 1,000.00 =	\$ 1,500.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	1,790 LFT	@	\$ 25.00 =	\$ 44,750.00
14	Underdrain, Cleanout	6 EA	@	\$ 4,000.00 =	\$ 24,000.00
15	Aggregate Base, 21AA, Special	232 TON	@	\$ 40.00 =	\$ 9,280.00
16	HMA, 5EML	243 TON	@	\$ 175.00 =	\$ 42,540.00
17	HMA, 4EML	365 TON	@	\$ 160.00 =	\$ 58,340.00
18	HMA, 5EML, Driveway Approach	18 TON	@	\$ 195.00 =	\$ 3,540.00
19	HMA, 4EML, Driveway Approach	30 TON	@	\$ 180.00 =	\$ 5,450.00
20	Structure, Adjust	5 EA	@	\$ 1,000.00 =	\$ 5,000.00
21	Structure, Reconstruct	2 EA	@	\$ 2,500.00 =	\$ 5,000.00
22	Maintenance Gravel/Millings (As Needed)	30 TON	@	\$ 30.00 =	\$ 900.00
23	Miscellaneous Drainage Improvements	1 LS	@	\$ 25,000.00 =	\$ 25,000.00
24	Site Restoration	1,703 SYD	@	\$ 7.00 =	\$ 11,920.00
25	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
26	Street Sign, Artistic, Special	2 EA	@	\$ 600.00 =	\$ 1,200.00
27	Maintaining Traffic	1 LS	@	\$ 5,000.00 =	\$ 5,000.00
SUBTOTAL					\$ 313,900.00
Construction Contingency (25%)					\$ 78,500.00
TOTAL CONSTRUCTION					\$ 392,400.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 98,100.00
TOTAL PROJECT					\$ 490,500.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 10

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: OLD ORCHARD TRAIL
WORK: **CRACK SEALING, SLURRY SEAL, DITCH CLEANOUT**
LIMITED FULL DEPTH REPAIRS, LIMITED DITCH & DRAINAGE IMPROVEMENTS

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: RAD/ECA
CHECKED BY: BWS
CURRENT (MARCH 2022) ENR: 12791.43
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 12,000.00	= \$ 12,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Crack Sealing, HMA Pavement	0.480 Mile	@	\$ 25,000.00	= \$ 12,000.00
4	HMA Surface, Rem	580 SYD	@	\$ 10.00	= \$ 5,800.00
5	HMA Surface, Rem, Driveway Approach	140 SYD	@	\$ 10.00	= \$ 1,400.00
6	Conc Pavt, Rem, Driveway Approach	60 SYD	@	\$ 30.00	= \$ 1,800.00
7	Brick Paver, Rem, Driveway	40 SYD	@	\$ 70.00	= \$ 2,800.00
8	Butt Joint	290 LFT	@	\$ 10.00	= \$ 2,900.00
9	Station Grading	- STA	@	\$ 3,000.00	= \$ -
10	Subgrade Undercutting, Type II, Special (As Needed)	193 CYD	@	\$ 40.00	= \$ 7,730.00
11	Large Aperture Geogrid (As Needed)	580 SYD	@	\$ 10.00	= \$ 5,800.00
12	Aggregate Base, 21AA, Special (As Needed)	122 TON	@	\$ 40.00	= \$ 4,870.00
13	1" x 3" Crushed Concrete, Special (As Needed)	174 TON	@	\$ 25.00	= \$ 4,350.00
14	Ditch Cleanout/Reestablishment (As Needed)	5 STA	@	\$ 1,000.00	= \$ 5,000.00
15	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00	= \$ -
16	Underdrain, Cleanout	- EA	@	\$ 4,000.00	= \$ -
17	Aggregate Base, 21AA, Special	122 TON	@	\$ 40.00	= \$ 4,870.00
18	Slurry Seal	5,800 SYD	@	\$ 5.00	= \$ 29,000.00
19	HMA, 5EML	48 TON	@	\$ 195.00	= \$ 9,330.00
20	HMA, 4EML	80 TON	@	\$ 180.00	= \$ 14,360.00
21	HMA, 5EML, Driveway Approach	20 TON	@	\$ 195.00	= \$ 3,860.00
22	HMA, 4EML, Driveway Approach	33 TON	@	\$ 180.00	= \$ 5,940.00
23	Structure, Adjust	4 EA	@	\$ 1,000.00	= \$ 4,000.00
24	Structure, Reconstruct	2 EA	@	\$ 2,500.00	= \$ 5,000.00
25	Maintenance Gravel/Millings (As Needed)	100 TON	@	\$ 30.00	= \$ 3,000.00
26	Miscellaneous Drainage Improvements	1 LS	@	\$ 45,000.00	= \$ 45,000.00
27	Site Restoration	5,698 SYD	@	\$ 7.00	= \$ 39,890.00
28	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
29	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
30	Maintaining Traffic	1 LS	@	\$ 10,500.00	= \$ 10,500.00
SUBTOTAL					\$ 246,300.00
Construction Contingency (25%)					\$ 61,600.00
TOTAL CONSTRUCTION					\$ 307,900.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 77,000.00
TOTAL PROJECT					\$ 384,900.00



PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 10a

555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: OLD ORCHARD TRAIL
WORK: **HMA REHAB 4", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
UNDERDRAIN (100% OF THE ROAD)
DITCH CLEANOUT (ASSUME 20%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: RAD/ECA
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 35,000.00	= \$ 35,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Cold Milling HMA, 4"	5,800 SYD	@	\$ 6.00	= \$ 34,800.00
4	HMA Surface, Rem, Driveway Approach	400 SYD	@	\$ 10.00	= \$ 4,000.00
5	Conc Pavt, Rem, Driveway Approach	140 SYD	@	\$ 30.00	= \$ 4,200.00
6	Brick Paver, Rem, Driveway	40 SYD	@	\$ 75.00	= \$ 3,000.00
7	Butt Joint	470 LFT	@	\$ 10.00	= \$ 4,700.00
8	Station Grading	25.5 STA	@	\$ 3,000.00	= \$ 76,500.00
9	Subgrade Undercutting, Type II, Special (As Needed)	193 CYD	@	\$ 40.00	= \$ 7,730.00
10	Large Aperture Geogrid (As Needed)	580 SYD	@	\$ 10.00	= \$ 5,800.00
11	Aggregate Base, 21AA, Special (As Needed)	122 TON	@	\$ 4.00	= \$ 490.00
12	1" x 3" Crushed Concrete, Special (As Needed)	174 TON	@	\$ 25.00	= \$ 4,350.00
13	Ditch Cleanout/Reestablishment (As Needed)	5 STA	@	\$ 1,000.00	= \$ 5,000.00
14	Underdrain, Subgrade, Open-Graded, 6-inch, Special	5,110 LFT	@	\$ 25.00	= \$ 127,750.00
15	Underdrain, Cleanout	12 EA	@	\$ 4,000.00	= \$ 48,000.00
16	Aggregate Base, 21AA, Special	609 TON	@	\$ 40.00	= \$ 24,360.00
17	HMA, 5EML	479 TON	@	\$ 175.00	= \$ 83,740.00
18	HMA, 4EML	798 TON	@	\$ 160.00	= \$ 127,600.00
19	HMA, 5EML, Driveway Approach	48 TON	@	\$ 195.00	= \$ 9,330.00
20	HMA, 4EML, Driveway Approach	80 TON	@	\$ 180.00	= \$ 14,360.00
21	Structure, Adjust	9 EA	@	\$ 1,000.00	= \$ 9,000.00
22	Structure, Reconstruct	4 EA	@	\$ 2,500.00	= \$ 10,000.00
23	Maintenance Gravel/Millings (As Needed)	100 TON	@	\$ 30.00	= \$ 3,000.00
24	Miscellaneous Drainage Improvements	1 LS	@	\$ 45,000.00	= \$ 45,000.00
25	Site Restoration	5,698 SYD	@	\$ 7.00	= \$ 39,890.00
26	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
27	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
28	Maintaining Traffic	1 LS	@	\$ 10,500.00	= \$ 10,500.00
SUBTOTAL					\$ 743,200.00
Construction Contingency (25%)					\$ 185,800.00
TOTAL CONSTRUCTION					\$ 929,000.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 232,300.00
TOTAL PROJECT					\$ 1,161,300.00



555 Hulet Drive
 Bloomfield Hills, MI 48302
 P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 11

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
 LOCATION: OLD STAGE ROAD
 WORK: **FULL DEPTH CONCRETE REPAIRS (SMALLER SCOPE)**
 AS-NEEDED CURB AND GUTTER (ASSUME 15%)

DATE: November 17, 2023
 PROJECT #: 20220208
 ESTIMATOR: WJW
 CHECKED BY: BWS
 CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 7,000.00 =	\$ 7,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
3	Conc Pavt, Rem	413 SYD	@	\$ 30.00 =	\$ 12,400.00
4	Conc Pavt, Rem, Driveway Approach	80 SYD	@	\$ 30.00 =	\$ 2,400.00
5	HMA Surface, Rem, Driveway Approaches	20 SYD	@	\$ 10.00 =	\$ 200.00
6	Curb and Gutter, Rem	260 LFT	@	\$ 9.00 =	\$ 2,340.00
7	Station Grading	8.5 STA	@	\$ 1,500.00 =	\$ 12,750.00
8	Subgrade Undercutting, Type II, Special (As Needed)	138 CYD	@	\$ 40.00 =	\$ 5,500.00
9	Large Aperture Geogrid (As Needed)	413 SYD	@	\$ 10.00 =	\$ 4,130.00
10	Aggregate Base, 21AA, Special (As Needed)	87 TON	@	\$ 40.00 =	\$ 3,470.00
11	1" x 3" Crushed Concrete, Special (As Needed)	124 TON	@	\$ 25.00 =	\$ 3,100.00
12	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00 =	\$ -
13	Underdrain, Cleanout	- EA	@	\$ 4,000.00 =	\$ -
14	Aggregate Base, 21AA, Special	43 TON	@	\$ 40.00 =	\$ 1,740.00
15	Driveway, Nonreinforced Conc, 6 inch	100 SYD	@	\$ 50.00 =	\$ 5,000.00
16	Conc Pavt, 8 inch	413 SYD	@	\$ 65.00 =	\$ 26,860.00
17	Curb and Gutter, Conc, Det D3	260 LFT	@	\$ 35.00 =	\$ 9,090.00
18	Structure, Adjust	8 EA	@	\$ 1,000.00 =	\$ 8,000.00
19	Structure, Reconstruct	4 EA	@	\$ 2,500.00 =	\$ 10,000.00
20	Maintenance Gravel/Millings (As Needed)	60 TON	@	\$ 30.00 =	\$ 1,800.00
21	Site Restoration	282 SYD	@	\$ 7.00 =	\$ 1,970.00
22	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
23	Street Sign, Artistic, Special	3 EA	@	\$ 600.00 =	\$ 1,800.00
24	Maintaining Traffic	1 LS	@	\$ 15,000.00 =	\$ 15,000.00
SUBTOTAL					\$ 139,600.00
Construction Contingency (25%)					\$ 34,900.00
TOTAL CONSTRUCTION					\$ 174,500.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 43,600.00
TOTAL PROJECT					\$ 218,100.00



555 Hulet Drive
 Bloomfield Hills, MI 48302
 P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 11a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
 LOCATION: OLD STAGE ROAD
 WORK: **FULL DEPTH CONCRETE REPAIRS (EXPANDED SCOPE)**
 AS-NEEDED CURB AND GUTTER (ASSUME 30%)

DATE: November 17, 2023
 PROJECT #: 20220208
 ESTIMATOR: WJW
 CHECKED BY: BWS
 CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 11,000.00	= \$ 11,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,500.00	= \$ 2,500.00
3	Conc Pavt, Rem	827 SYD	@	\$ 30.00	= \$ 24,800.00
4	Conc Pavt, Rem, Driveway Approach	160 SYD	@	\$ 30.00	= \$ 4,800.00
5	HMA Surface, Rem, Driveway Approaches	40 SYD	@	\$ 10.00	= \$ 400.00
6	Curb and Gutter, Rem	519 LFT	@	\$ 9.00	= \$ 4,670.00
7	Station Grading	8.5 STA	@	\$ 1,500.00	= \$ 12,750.00
8	Subgrade Undercutting, Type II, Special (As Needed)	275 CYD	@	\$ 40.00	= \$ 11,010.00
9	Large Aperture Geogrid (As Needed)	827 SYD	@	\$ 10.00	= \$ 8,270.00
10	Aggregate Base, 21AA, Special (As Needed)	173 TON	@	\$ 40.00	= \$ 6,940.00
11	1" x 3" Crushed Concrete, Special (As Needed)	248 TON	@	\$ 25.00	= \$ 6,200.00
12	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00	= \$ -
13	Underdrain, Cleanout	- EA	@	\$ 4,000.00	= \$ -
14	Aggregate Base, 21AA, Special	87 TON	@	\$ 40.00	= \$ 3,470.00
15	Driveway, Nonreinforced Conc, 6 inch	200 SYD	@	\$ 50.00	= \$ 10,000.00
16	Conc Pavt, 8 inch	827 SYD	@	\$ 65.00	= \$ 53,720.00
17	Curb and Gutter, Conc, Det D3	519 LFT	@	\$ 35.00	= \$ 18,180.00
18	Structure, Adjust	8 EA	@	\$ 1,000.00	= \$ 8,000.00
19	Structure, Reconstruct	4 EA	@	\$ 2,500.00	= \$ 10,000.00
20	Maintenance Gravel/Millings (As Needed)	60 TON	@	\$ 30.00	= \$ 1,800.00
21	Site Restoration	563 SYD	@	\$ 7.00	= \$ 3,940.00
22	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
23	Street Sign, Artistic, Special	3 EA	@	\$ 600.00	= \$ 1,800.00
24	Maintaining Traffic	1 LS	@	\$ 15,000.00	= \$ 15,000.00
SUBTOTAL					\$ 221,800.00
Construction Contingency (25%)					\$ 55,500.00
TOTAL CONSTRUCTION					\$ 277,300.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 69,300.00
TOTAL PROJECT					\$ 346,600.00



PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 12

555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: SAGER CT.
WORK: HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS
100% UNDERDRAIN
DITCH CLEANOUT (ASSUME 75%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 13,000.00	= \$ 13,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Cold Milling HMA, 5"	1,700 SYD	@	\$ 6.00	= \$ 10,200.00
3	HMA Surface, Rem	149 SYD	@	\$ 10.00	= \$ 1,490.00
4	HMA Surface, Rem, Driveway Approach	120 SYD	@	\$ 10.00	= \$ 1,200.00
5	Conc Pavt, Rem, Driveway Approach	20 SYD	@	\$ 30.00	= \$ 600.00
6	Butt Joint	- LFT	@	\$ 10.00	= \$ -
7	Station Grading	7 STA	@	\$ 3,000.00	= \$ 21,000.00
8	Subgrade Undercutting, Type II, Special (As Needed)	17 CYD	@	\$ 40.00	= \$ 660.00
9	Large Aperture Geogrid (As Needed)	170 SYD	@	\$ 10.00	= \$ 1,700.00
10	Aggregate Base, 21AA, Special (As Needed)	36 TON	@	\$ 40.00	= \$ 1,430.00
11	1" x 3" Crushed Concrete, Special (As Needed)	51 TON	@	\$ 25.00	= \$ 1,280.00
12	Ditch Cleanout/Reestablishment (As Needed)	8.025 STA	@	\$ 1,000.00	= \$ 8,030.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	1,390 LFT	@	\$ 25.00	= \$ 34,750.00
14	Underdrain, Cleanout	5 EA	@	\$ 4,000.00	= \$ 20,000.00
15	Aggregate Base, 21AA, Special	179 TON	@	\$ 40.00	= \$ 7,140.00
16	HMA, 5EML	187 TON	@	\$ 175.00	= \$ 32,730.00
17	HMA, 4EML	281 TON	@	\$ 160.00	= \$ 44,880.00
18	HMA, 5EML, Driveway Approach	12 TON	@	\$ 195.00	= \$ 2,250.00
19	HMA, 4EML, Driveway Approach	19 TON	@	\$ 180.00	= \$ 3,470.00
20	Structure, Adjust	2 EA	@	\$ 1,000.00	= \$ 2,000.00
21	Structure, Reconstruct	1 EA	@	\$ 2,500.00	= \$ 2,500.00
22	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00	= \$ 1,500.00
23	Miscellaneous Drainage Improvements	1 LS	@	\$ 35,000.00	= \$ 35,000.00
24	Site Restoration	1 LS	@	\$ 10,000.00	= \$ 10,000.00
25	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
26	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
27	Maintaining Traffic	1 LS	@	\$ 6,000.00	= \$ 6,000.00
SUBTOTAL					\$ 267,900.00
Construction Contingency (25%)					\$ 67,000.00
TOTAL CONSTRUCTION					\$ 334,900.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 83,700.00
TOTAL PROJECT					\$ 418,600.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 13

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: SHAGWOOD DR.
WORK: **HMA RESURFACING 2", DITCH CLEANOUT CRACK TREATMENT**
DITCH CLEANOUT (ASSUME 75%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 12,000.00	= \$ 12,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Cold Milling HMA, 2"	4,350 SYD	@	\$ 4.00	= \$ 17,400.00
4	Crack Repair, Det 7	300 ft	@	\$ 25.00	= \$ 7,500.00
5	HMA Surface, Rem	389 SYD	@	\$ 10.00	= \$ 3,890.00
6	HMA Surface, Rem, Driveway Approach	160 SYD	@	\$ 10.00	= \$ 1,600.00
7	Brick Paver, Rem, Driveway Approach	40 SYD	@	\$ 70.00	= \$ 2,800.00
8	Butt Joint	230 LFT	@	\$ 10.00	= \$ 2,300.00
9	Station Grading	- STA	@	\$ 3,000.00	= \$ -
10	Subgrade Undercutting, Type II, Special (As Needed)	130 CYD	@	\$ 40.00	= \$ 5,190.00
11	Large Aperture Geogrid (As Needed)	389 SYD	@	\$ 10.00	= \$ 3,890.00
12	Aggregate Base, 21AA, Special (As Needed)	82 TON	@	\$ 40.00	= \$ 3,270.00
13	1" x 3" Crushed Concrete, Special (As Needed)	117 TON	@	\$ 25.00	= \$ 2,920.00
14	Ditch Cleanout/Reestablishment (As Needed)	13.5 STA	@	\$ 1,000.00	= \$ 13,500.00
15	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@	\$ 25.00	= \$ -
16	Underdrain, Cleanout	- EA	@	\$ 4,000.00	= \$ -
17	Aggregate Base, 21AA, Special	- TON	@	\$ 40.00	= \$ -
18	HMA, 5EML	479 TON	@	\$ 180.00	= \$ 86,130.00
19	HMA, 4EML	64 TON	@	\$ 180.00	= \$ 11,550.00
20	HMA, 5EML, Driveway Approach	17 TON	@	\$ 195.00	= \$ 3,220.00
21	HMA, 4EML, Driveway Approach	28 TON	@	\$ 180.00	= \$ 4,950.00
22	Structure, Adjust	9 EA	@	\$ 1,000.00	= \$ 9,000.00
23	Structure, Reconstruct	4 EA	@	\$ 2,500.00	= \$ 10,000.00
24	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00	= \$ 1,500.00
25	Miscellaneous Drainage Improvements	1 LS	@	\$ 35,000.00	= \$ 35,000.00
26	Site Restoration	1 LS	@	\$ 10,000.00	= \$ 10,000.00
27	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
28	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
29	Maintaining Traffic	1 LS	@	\$ 6,000.00	= \$ 6,000.00
SUBTOTAL					\$ 258,700.00
Construction Contingency (25%)					\$ 64,700.00
TOTAL CONSTRUCTION					\$ 323,400.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 80,900.00
TOTAL PROJECT					\$ 404,300.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 13a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: SHAGWOOD DR.
WORK: **HMA REHAB 5", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
UNDERDRAIN (100% OF THE ROAD)
DITCH CLEANOUT (ASSUME 75%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 26,000.00	= \$ 26,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00	= \$ 2,000.00
3	Cold Milling HMA, 5"	4,350 SYD	@	\$ 6.00	= \$ 26,100.00
3	HMA Surface, Rem	389 SYD	@	\$ 10.00	= \$ 3,890.00
4	HMA Surface, Rem, Driveway Approach	360 SYD	@	\$ 10.00	= \$ 3,600.00
5	Brick Paver, Rem, Driveway Approach	40 SYD	@	\$ 70.00	= \$ 2,800.00
6	Butt Joint	410 LFT	@	\$ 10.00	= \$ 4,100.00
7	Station Grading	18 STA	@	\$ 3,000.00	= \$ 54,000.00
8	Subgrade Undercutting, Type II, Special (As Needed)	43 CYD	@	\$ 40.00	= \$ 1,730.00
9	Large Aperture Geogrid (As Needed)	435 SYD	@	\$ 10.00	= \$ 4,350.00
10	Aggregate Base, 21AA, Special (As Needed)	91 TON	@	\$ 40.00	= \$ 3,650.00
11	1" x 3" Crushed Concrete, Special (As Needed)	131 TON	@	\$ 25.00	= \$ 3,260.00
12	Ditch Cleanout/Reestablishment (As Needed)	13.5 STA	@	\$ 1,000.00	= \$ 13,500.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	3,350 LFT	@	\$ 25.00	= \$ 83,750.00
14	Underdrain, Cleanout	8 EA	@	\$ 4,000.00	= \$ 32,000.00
15	Aggregate Base, 21AA, Special	41 TON	@	\$ 40.00	= \$ 1,630.00
16	HMA, 5EML	479 TON	@	\$ 175.00	= \$ 83,740.00
17	HMA, 4EML	718 TON	@	\$ 160.00	= \$ 114,840.00
18	HMA, 5EML, Driveway Approach	33 TON	@	\$ 195.00	= \$ 6,440.00
19	HMA, 4EML, Driveway Approach	55 TON	@	\$ 180.00	= \$ 9,900.00
20	Structure, Adjust	9 EA	@	\$ 1,000.00	= \$ 9,000.00
21	Structure, Reconstruct	4 EA	@	\$ 2,500.00	= \$ 10,000.00
22	Maintenance Gravel/Millings (As Needed)	50 TON	@	\$ 30.00	= \$ 1,500.00
23	Miscellaneous Drainage Improvements	1 LS	@	\$ 35,000.00	= \$ 35,000.00
24	Site Restoration	1 LS	@	\$ 10,000.00	= \$ 10,000.00
25	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00	= \$ 2,500.00
26	Street Sign, Artistic, Special	1 EA	@	\$ 600.00	= \$ 600.00
27	Maintaining Traffic	1 LS	@	\$ 6,000.00	= \$ 6,000.00
SUBTOTAL					\$ 555,900.00
Construction Contingency (25%)					\$ 139,000.00
TOTAL CONSTRUCTION					\$ 694,900.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 173,700.00
TOTAL PROJECT					\$ 868,600.00



555 Hulet Drive
Bloomfield Hills, MI 48302
P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 14

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
LOCATION: TIMBER TRAIL
WORK: HMA CRUSH & SHAPE + 3" RESURFACING, DRAINAGE
NO UNDERDRAIN
DITCH CLEANOUT (ASSUME 75%)

DATE: November 17, 2023
PROJECT #: 20220208
ESTIMATOR: WJW
CHECKED BY: BWS
CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev Unit Price	Rev Total
1	Mobilization	1 LS	@ \$ 18,000.00 = \$	18,000.00
2	Color Audio-Video Route Survey	1 LS	@ \$ 2,000.00 = \$	2,000.00
3	HMA Base Crushing and Shaping	4,355 SYD	@ \$ 5.00 = \$	21,780.00
4	HMA Surface, Rem, Driveway Approaches	40 SYD	@ \$ 10.00 = \$	400.00
5	Butt Joint	170 LFT	@ \$ 10.00 = \$	1,700.00
6	Station Grading	22 STA	@ \$ 5,000.00 = \$	110,000.00
7	Subgrade Undercutting, Type II, Special (As Needed)	218 CYD	@ \$ 40.00 = \$	8,710.00
8	1" Aperture Geogrid (As Needed)	653 SYD	@ \$ 10.00 = \$	6,530.00
9	Aggregate Base, 21AA, Special (As Needed)	- TON	@ \$ 40.00 = \$	-
10	1" x 3" Crushed Concrete, Special (As Needed)	- TON	@ \$ 25.00 = \$	-
11	Earthwork to Place & Compact Pulverized HMA in Undercuts	218 CYD	@ \$ 5.00 = \$	1,090.00
12	Ditch Cleanout/Reestablishment (As Needed)	16.5 STA	@ \$ 1,000.00 = \$	16,500.00
13	Underdrain, Subgrade, Open-Graded, 6-inch, Special	- LFT	@ \$ 25.00 = \$	-
14	Underdrain, Cleanout	- EA	@ \$ 4,000.00 = \$	-
15	Aggregate Base, 21AA, Special	- TON	@ \$ 40.00 = \$	-
16	HMA, 5EML	359 TON	@ \$ 175.00 = \$	62,880.00
17	HMA, 4EML	359 TON	@ \$ 160.00 = \$	57,490.00
18	HMA, 5EML, Driveway Approach	3 TON	@ \$ 195.00 = \$	640.00
19	HMA, 4EML, Driveway Approach	6 TON	@ \$ 180.00 = \$	990.00
20	Structure, Adjust	2 EA	@ \$ 1,000.00 = \$	2,000.00
21	Structure, Reconstruct	1 EA	@ \$ 2,500.00 = \$	2,500.00
22	Maintenance Gravel/Millings (As Needed)	90 TON	@ \$ 30.00 = \$	2,700.00
23	Miscellaneous Drainage Improvements	1 LS	@ \$ 45,000.00 = \$	45,000.00
24	Site Restoration	1 LS	@ \$ 10,000.00 = \$	10,000.00
25	Soil Erosion and Sedimentation Control	1 LS	@ \$ 2,500.00 = \$	2,500.00
26	Street Sign, Artistic, Special	1 EA	@ \$ 600.00 = \$	600.00
27	Maintaining Traffic	1 LS	@ \$ 8,000.00 = \$	8,000.00
SUBTOTAL				\$ 382,000.00
Construction Contingency (25%)				\$ 95,500.00
TOTAL CONSTRUCTION				\$ 477,500.00
Engineering, Survey, Geotechnical, Permitting (25%)				\$ 119,400.00
TOTAL PROJECT				\$ 596,900.00



555 Hulet Drive
 Bloomfield Hills, MI 48302
 P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 14a

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
 LOCATION: TIMBER TRAIL
 WORK: **HMA REHAB 4", UNDERDRAIN, DRAINAGE IMPROVEMENTS**
 UNDERDRAIN (100% OF THE ROAD)
 DITCH CLEANOUT (ASSUME 75%)

DATE: November 17, 2023
 PROJECT #: 20220208
 ESTIMATOR: WJW
 CHECKED BY: BWS
 CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 28,000.00 =	\$ 28,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
3	HMA Surface, Rem	4,355 SYD	@	\$ 6.00 =	\$ 26,130.00
4	HMA Surface, Rem, Driveway Approaches	40 SYD	@	\$ 10.00 =	\$ 400.00
5	Butt Joint	170 LFT	@	\$ 10.00 =	\$ 1,700.00
6	Station Grading	22 STA	@	\$ 3,000.00 =	\$ 66,000.00
7	Subgrade Undercutting, Type II, Special (As Needed)	290 CYD	@	\$ 40.00 =	\$ 11,610.00
8	Large Aperture Geogrid (As Needed)	871 SYD	@	\$ 10.00 =	\$ 8,710.00
9	Aggregate Base, 21AA, Special (As Needed)	181 TON	@	\$ 40.00 =	\$ 7,240.00
10	1" x 3" Crushed Concrete, Special (As Needed)	261 TON	@	\$ 25.00 =	\$ 6,540.00
11	Ditch Cleanout/Reestablishment (As Needed)	16.5 STA	@	\$ 1,000.00 =	\$ 16,500.00
12	Underdrain, Subgrade, Open-Graded, 6-inch, Special	4,390 LFT	@	\$ 25.00 =	\$ 109,750.00
13	Underdrain, Cleanout	13 EA	@	\$ 4,000.00 =	\$ 52,000.00
14	Aggregate Base, 21AA, Special	457 TON	@	\$ 40.00 =	\$ 18,290.00
15	HMA, 5EML	359 TON	@	\$ 175.00 =	\$ 62,880.00
16	HMA, 4EML	599 TON	@	\$ 160.00 =	\$ 95,810.00
17	HMA, 5EML, Driveway Approach	3 TON	@	\$ 195.00 =	\$ 640.00
18	HMA, 4EML, Driveway Approach	6 TON	@	\$ 180.00 =	\$ 990.00
19	Structure, Adjust	2 EA	@	\$ 1,000.00 =	\$ 2,000.00
20	Structure, Reconstruct	1 EA	@	\$ 2,500.00 =	\$ 2,500.00
21	Maintenance Gravel/Millings (As Needed)	90 TON	@	\$ 30.00 =	\$ 2,700.00
22	Miscellaneous Drainage Improvements	1 LS	@	\$ 45,000.00 =	\$ 45,000.00
23	Site Restoration	1 LS	@	\$ 10,000.00 =	\$ 10,000.00
24	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
25	Street Sign, Artistic, Special	1 EA	@	\$ 600.00 =	\$ 600.00
26	Maintaining Traffic	1 LS	@	\$ 8,000.00 =	\$ 8,000.00
SUBTOTAL					\$ 588,500.00
Construction Contingency (25%)					\$ 147,100.00
TOTAL CONSTRUCTION					\$ 735,600.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 183,900.00
TOTAL PROJECT					\$ 919,500.00



555 Hulet Drive
 Bloomfield Hills, MI 48302
 P: (248) 454-6300 - F: (248) 454-6312

PRELIMINARY OPINION OF PROBABLE CONSTRUCTION COST ESTIMATE NO. 14b

PROJECT: VILLAGE OF BINGHAM FARMS ROAD IMPROVEMENTS PROGRAM
 LOCATION: TIMBER TRAIL - PATH
 WORK: HMA CRUSH & SHAPE + 2", DITCH CLEANOUT
 DITCH CLEANOUT (ASSUME 20%)

DATE: September 25, 2023
 PROJECT #: 20220208
 ESTIMATOR: WJW
 CHECKED BY: BWS
 CURRENT ENR (Nov. 2023): 13511

Item	Qty	Unit	Rev	Unit Price	Rev Total
1	Mobilization	1 LS	@	\$ 10,000.00 =	\$ 10,000.00
2	Color Audio-Video Route Survey	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
3	HMA Base Crushing and Shaping	4,355 SYD	@	\$ 5.00 =	\$ 21,780.00
4	HMA Surface, Rem, Driveway Approaches	40 SYD	@	\$ 10.00 =	\$ 400.00
5	Butt Joint	170 LFT	@	\$ 10.00 =	\$ 1,700.00
6	Subgrade Undercutting, Type II, Special (As Needed)	218 CYD	@	\$ 40.00 =	\$ 8,710.00
7	Large Aperture Geogrid (As Needed)	653 SYD	@	\$ 10.00 =	\$ 6,530.00
8	Aggregate Base, 21AA, Special (As Needed)	137 TON	@	\$ 40.00 =	\$ 5,490.00
9	1" x 3" Crushed Concrete, Special (As Needed)	196 TON	@	\$ 25.00 =	\$ 4,900.00
10	Ditch Cleanout/Reestablishment (As Needed)	4.5 STA	@	\$ 1,000.00 =	\$ 4,500.00
11	HMA, 36A	406 TON	@	\$ 185.00 =	\$ 75,130.00
12	Structure, Adjust	2 EA	@	\$ 1,000.00 =	\$ 2,000.00
13	Structure, Reconstruct	1 EA	@	\$ 2,500.00 =	\$ 2,500.00
14	Bollards	9 EA	@	\$ 900.00 =	\$ 8,100.00
15	Miscellaneous Drainage Improvements	1 LS	@	\$ 45,000.00 =	\$ 45,000.00
16	Site Restoration	1 LS	@	\$ 5,000.00 =	\$ 5,000.00
17	Soil Erosion and Sedimentation Control	1 LS	@	\$ 2,500.00 =	\$ 2,500.00
18	Maintaining Traffic	1 LS	@	\$ 2,000.00 =	\$ 2,000.00
SUBTOTAL					\$ 208,200.00
Construction Contingency (25%)					\$ 52,100.00
TOTAL CONSTRUCTION					\$ 260,300.00
Engineering, Survey, Geotechnical, Permitting (25%)					\$ 65,100.00
TOTAL PROJECT					\$ 325,400.00