



ENGINEERING • 115 Executive Parkway, Suite 400 • Hudson, Ohio 44236 • (330) 342-1770

Date: August 15, 2019

To: Mayor Basil and City Council

C: Jane Howington, City Manager
Thomas J. Sheridan, P.E., P.S., Asst. City Manager – Professional Services
Frank Comeriato, Asst. City Manager – Operations
Jeff Knoblauch, Asst. City Manager – Finance Director
Brian Griffith, Director of Management & Budget

From: Bradley Kosco, P.E., P.S., City Engineer

Re: **\$5.0 Million Accelerated Asphalt Program – Alternative Road Review**

During the Council Workshop meeting on July 23, 2019, City staff discussed an “Accelerated Asphalt Road Program” utilizing a proposed \$5 million bond. As introduced, the program would supplement the City’s existing Annual Asphalt Program and focus on the repaving of the highest average daily traffic, arterial or major collector roads.

During the meeting, Council inquired if using some of the \$5 million bond funds towards the Annual Concrete Road Overlay program is worthwhile to close-out those concrete streets that have yet to have concrete road repairs and overlay process completed. City staff has evaluated the total cost to repair/overlay remaining concrete streets, the life expectancy of concrete roads with asphalt overlay, and the resulting, City-wide PCI rating if all remaining concrete streets are repaired/overlaid and along with some of the major roads being resurfaced.

Cost to Repair and Overlay Existing Concrete Streets

To date, approximately 12.6 lane miles of concrete roads have been repaired and overlaid with asphalt since 2004. **Approximately 14.5 lane miles of concrete roads remain to be overlaid at a cost of \$2.3 million.** Using the proposed Annual Concrete Road Overlay budget of \$225,000/year, it will take approximately 10 years to repair/overlay the remaining concrete streets in Hudson.

Life Expectancy of Concrete Street with Asphalt Overlay

In 1999, S. Hayden Parkway between E. Streetsboro Street and Ravenna Street was repaired and provided with an asphalt overlay. The 2018 PCI ratings of S. Hayden Parkway range from 57 up to 74.

In 2004, the portions of Victoria Parkway (N. Hayden to Glen Echo Dr) and St. James Court (Victoria Parkway to the cul-de-sac) were repaired and overlaid. Their 2018 PCI is 74. Therefore a 20+ year life expectancy out of a concrete road with asphalt overlay is expected.

Estimated City-wide PCI Rating After \$5 Million Bond Expenditure

As previously noted, the City-wide PCI rating if only major asphalt roads were resurfaced is 76+. The draft list of major asphalt roads that could be paved with a \$5 million bond is attached as Exhibit A to this memo.

City staff has estimated that an if approximately \$2.7 million was to be used towards paving major asphalt roads and \$2.3 million was used to repair and overlay the remaining asphalt roads, the City-wide PCI rating is also 76. A draft list of a combined, major asphalt road and concrete streets to be overlaid with a \$5 million bond is attached to this memo as Exhibit B.

EXHIBIT A - \$5 MILLION VIA MAIN ROADS ONLY

DRAFT

2020-2021 ACCELERATED ASPHALT PROGRAM - MAIN ROADS

Street Name	From	To	PCI	Est. Cost	Area (SY)	Cost/SY	Length/CL Miles	Lane Miles	Running Totals
Hudson-Aurora Rd.	Herrick Park Dr.	Stow Rd.	41	\$229,917.00	13,449.00	\$17.10	0.68	1.91	\$229,917.00
Stow Rd.	E. Streetsboro St.	Deerhollow Dr.	36	\$97,000.00	6,319.00	\$15.35	0.31	0.90	\$326,917.00
Stow Rd.	Deerhollow Rd.	Hudson Springs Park	37	\$109,146.00	7,291.00	\$14.97	0.41	1.04	\$436,063.00
Stow Rd.	Hudson Springs Park	Turnpike Bridge	40	\$36,233.00	2,635.00	\$13.75	0.16	0.37	\$472,296.00
Stow Rd.	I80 Bridge	Hudson-Aurora St.	47	\$62,138.80	4,529.00	\$13.72	0.56	0.64	\$534,434.80
Stow Rd.	Hudson-Aurora Rd.	Middleton Rd	47	\$138,243.80	11,582.00	\$11.94	0.58	1.65	\$672,678.60
Stow Rd.	Middleton Rd.	NCL	39	\$122,715.00	8,134.00	\$15.09	0.49	1.16	\$795,393.60
Ravenna St.	S. Main St.	S. Oviatt St.	55	\$71,861.20	2,879.00	\$24.96	0.30	0.41	\$867,254.80
Ravenna St.	S. Oviatt St.	S. Hayden Pkwy	58	\$206,346.00	11,088.00	\$18.61	0.68	1.58	\$1,073,600.80
W. Prospect St.	Turnpike Bridge	Hines Hill Rd.	37	\$85,417.00	5271	\$16.21	0.41	0.75	\$1,159,017.80
W. Prospect St.	Turnpike Bridge	Steepleview Dr.	37	\$81,520.00	4,994.00	\$16.32	0.39	0.71	\$1,240,537.80
W. Prospect St.	Steepleview Dr.	Morse Rd.	53	\$104,051.00	6,464.00	\$16.10	0.47	0.92	\$1,344,588.80
W. Prospect St.	Morse Rd.	Pavement Change (east)	42	\$58,096.00	3,677.00	\$15.80	0.30	0.52	\$1,402,684.80
Middleton Road	Valleyview Rd.	Darrow Rd.	47	\$299,053.00	17279	\$17.31	1.20	2.45	\$1,701,737.80
Hines Hill Rd.	Valleyview Rd.	Darrow Rd.	46	\$183,371.00	11,143.00	\$16.46	0.75	1.58	\$1,885,108.80
Hines Hill Rd.	Valleyview Rd.	W. Prospect St.	59	\$111,576.00	7,107.00	\$15.70	0.50	1.01	\$1,996,684.80
Valleyview Rd.	Darrow Rd.	south of Hines Hill Rd.	56	\$208,481.00	12,343.00	\$16.89	0.79	1.75	\$2,205,165.80
Valleyview Rd.	south of Hines Hill Rd.	Middleton Rd.	61	\$168,867.00	10,062.00	\$16.78	0.66	1.43	\$2,374,032.80
Valleyview Rd.	Middleton Rd.	NCL	57	\$190,180.00	11,353.00	\$16.75	0.74	1.61	\$2,564,212.80
Terex Rd.	Londonairy Blvd.	Nottingham Gate Blvd.	59	\$137,650.00	7,860.00	\$17.51	0.38	1.12	\$2,701,862.80
Terex Rd.	Nottingham Gate Blvd.	Barlow Rd.	49	\$213,240.00	13,200.00	\$16.15	0.68	1.88	\$2,915,102.80
Terex Rd.	Barlow Rd.	#967 Terex Rd	57	\$248,866.00	15,254.00	\$16.31	0.78	2.17	\$3,163,968.80
Terex Rd.	#967 Terex Rd	Road Split	57	\$174,520.00	10,641.00	\$16.40	0.53	1.51	\$3,338,488.80
Terex Rd.	Road Split	Darrow Rd.	57	\$174,157.00	10,099.00	\$17.24	1.00	1.43	\$3,512,645.80
Barlow Rd.	Willshire Park Dr.	WCL	61	\$202,660.00	12,267.00	\$16.52	0.65	1.74	\$3,715,305.80
Barlow Rd.	Stow Rd.	RR Tracks	52	\$274,371.00	16,543.00	\$16.59	0.61	2.35	\$3,989,676.80
Barlow Rd.	Stow Rd.	Young Rd.	51	\$101,908.00	5,936.00	\$17.17	0.38	0.84	\$4,091,584.80
Boston Mills Rd.	Laurel Lake Dr.	WCL	65	\$273,429.00	17,089.00	\$16.00	1.00	2.43	\$4,365,013.80
M.O.T. and Mobilization				\$150,000.00					\$4,515,013.80
Inspection				\$75,000.00					\$4,590,013.80
10% Contingency				\$451,501.38					\$5,041,515.18
Totals =					266,488.00	Totals	16.39	37.85	

**EXHIBIT B - \$5 MILLION VIA MAIN ROADS & CONCRETE OVERLAY ROADS
(SHEET 1/2)**

DRAFT

2020 ASPHALT OVERLAY ROADS PROGRAM - DRAFT										
<u>Street Name</u>	<u>From</u>	<u>To</u>	<u>Type</u>	PCI	Est. Cost	Area (SY)	Cost/SY	Length/CL Miles	Lane Miles	Runing Totals
Arborwood Dr.	Old Farm Ln.	Cul-De-Sac	Asphalt Overlay	60	\$61,847.00	3,256	\$18.99	0.24	0.46	\$61,847.00
Blue Heron Dr.	Hudson Park Dr.	Pavement Change	Asphalt Overlay	79	\$17,016.00	735	\$23.15	0.04	0.10	\$78,863.00
Carriage House Ct.	Old Farm Ln.	Cul-De-Sac	Asphalt Overlay	76	\$45,653.00	2,526	\$18.07	0.16	0.36	\$124,516.00
Fox Den Dr.	Hudson Park Dr.	Dead End	Asphalt Overlay	68	\$29,428.00	1,600	\$18.39	0.11	0.23	\$153,944.00
Old Farm Ln.	Hudson Park Dr.	Hudson Park Dr.	Asphalt Overlay	70	\$156,785.00	8,635	\$18.16	0.58	1.23	\$310,729.00
Hudson Park Dr.	Hudson-Aurora Rd.	Pavement Change	Asphalt Overlay	69	\$179,623.00	8,175	\$21.97	0.56	1.16	\$490,352.00
N. Marblehead Dr.	Middleton Rd.	Cul-De-Sac	Asphalt Overlay		\$98,001.00	4934	\$19.86	0.32	0.70	\$588,353.00
Berks Way	N. Marblehead Dr.	Pavement Change	Asphalt Overlay		\$12,813.00	664	\$19.30	0.04	0.09	\$601,166.00
Bauley Dr.	Glen Echo Dr.	Cul-de-Sac	Asphalt Overlay		\$49,148.00	2,234	\$22.00	0.15	0.32	\$650,314.00
Tyre Dr. East	Glen Echo Dr.	Cul-de-Sac	Asphalt Overlay		\$59,796.00	2,718	\$22.00	0.19	0.39	\$710,110.00
Tyre Dr. West	Glen Echo Dr.	Cul-de-Sac	Asphalt Overlay		\$25,777.00	1,513	\$17.04	0.11	0.21	\$735,887.00
Kings Way	Cul-de-Sac	Cul-De-Sac	Asphalt Overlay		\$51,392.00	2336	\$22.00	0.15	0.33	\$787,279.00
Glen Echo	Kings Way	Hudson-Aurora Rd.	Asphalt Overlay		\$108,394.00	7,383	\$14.68	0.65	1.05	\$895,673.00
10% Contingency					\$89,567.30					\$985,240.30
						7,383	Totals	0.65	1.05	\$985,240.30

2020 MAIN ASPHALT ROADS PROGRAM - DRAFT										
<u>Street Name</u>	<u>From</u>	<u>To</u>	<u>Type</u>	PCI	Est. Cost	Area (SY)	Cost/SY	Length/CL Miles	Lane Miles	Runing Totals
Hudson-Aurora Rd.	Herrick Park Dr.	Stow Rd.	Mill & Resurface	41	\$229,917.00	13,449.00	\$17.10	0.68	1.91	\$229,917.00
Stow Rd.	E. Streetsboro St.	Deerhollow Dr.	Mill & Resurface	36	\$122,399.00	6,319.00	\$19.37	0.31	0.90	\$352,316.00
Stow Rd.	Deerhollow Rd.	Hudson Springs Park	Mill & Resurface	37	\$127,553.00	7,291.00	\$17.49	0.41	1.04	\$479,869.00
Stow Rd.	Hudson Springs Park	Turnpike Bridge	Mill & Resurface	40	\$40,882.00	2,635.00	\$15.51	0.16	0.37	\$520,751.00
Stow Rd.	I80 Bridge	Hudson-Aurora St.	Mill & Resurface	47	\$78,713.00	4,529.00	\$17.38	0.56	0.64	\$599,464.00
Stow Rd.	Hudson-Aurora Rd.	Middleton Rd	Mill & Resurface	47	\$180,688.00	11,582.00	\$15.60	0.58	1.65	\$780,152.00
Stow Rd.	Middleton Rd.	NCL	Mill & Resurface	39	\$140,302.00	8,134.00	\$17.25	0.49	1.16	\$920,454.00
Ravenna St.	S. Main St.	S. Oviatt St.	Mill & Resurface	55	\$71,861.20	2,879.00	\$24.96	0.30	0.41	\$992,315.20
Ravenna St.	S. Oviatt St.	S. Hayden Pkwy	Mill & Resurface	58	\$206,346.00	11,088.00	\$18.61	0.68	1.58	\$1,198,661.20
Middleton Road	Valleyview Rd.	Darrow Rd.	Mill & Resurface	47	\$299,053.00	17279	\$17.31	1.20	2.45	\$1,497,714.20
10% Contingency					\$149,771.42					\$1,647,485.62
						85,185.00	Totals	5.37	12.10	

Total for 2020 = \$2,632,725.92

**EXHIBIT B - \$5 MILLION VIA MAIN ROADS & CONCRETE OVERLAY ROADS
(SHEET 2/2)**

DRAFT

2021 ASPHALT OVERLAY ROADS PROGRAM - DRAFT										
<u>Street Name</u>	<u>From</u>	<u>To</u>	<u>Type</u>	PCI	Est. Cost	Area (SY)	Cost/SY	Length/CL Miles	Lane Miles	Runing Totals
Brewster Dr.	Mayflower Dr.	Dead End	Asphalt Overlay		\$132,850.00	4,840	\$27.45	0.29	0.69	\$132,850.00
Carver Ln.	Eastham Way	Cul-De-Sac	Asphalt Overlay		\$26,290.00	1,195	\$22.00	0.16	0.17	\$159,140.00
Chatham Way	Dead End	Cul-De-Sac	Asphalt Overlay		\$59,439.00	2702	\$22.00	0.17	0.38	\$218,579.00
Eastham Way	Dead End	Cul-De-Sac	Asphalt Overlay		\$148,251.00	6739	\$22.00	0.49	0.96	\$366,830.00
Miles Standish Ln.	Willow Lake Dr.	Eastham way	Asphalt Overlay		\$39,908.00	1814	\$22.00	0.13	0.26	\$406,738.00
Willow Lake Dr.	Eastham Way	Cul-De-Sac	Asphalt Overlay		\$93,676.00	4258	\$22.00	0.29	0.60	\$500,414.00
Parmalee Dr.	S. Hayden Pkwy	S. Hayden Pkwy	Asphalt Overlay		\$108,762.00	6,945	\$15.66	0.49	0.99	\$609,176.00
Simon Rd.	N. Hayden Pkwy	Cul-De-Sac	Asphalt Overlay		\$63,426.00	2883	\$22.00	0.20	0.41	\$672,602.00
Southdale Ave.	Sunset Dr.	Pavement Change	Asphalt Overlay	63	\$43,806.00	2,055	\$21.32	0.09	0.29	\$716,408.00
Sunset Dr.	Stoney Hill Dr.	Cul-De-Sac	Asphalt Overlay		\$217,011.00	9,832	\$22.07	0.68	1.40	\$933,419.00
Sussex Rd	Atterbury Blvd.	Atterbury Blvd.	Asphalt Overlay		\$127,072.00	5776	\$22.00	0.40	0.82	\$1,060,491.00
Chadbourne Dr.	Lake Forest Dr.	Lake Forest Dr.	Asphalt Overlay		\$153,648.00	6984	\$22.00	0.52	0.99	\$1,214,139.00
Hickory Ln.	Westhaven	Cul-De-Sac	Asphalt Overlay	67	\$57,552.00	2,616	\$22.00	0.20	0.37	\$1,271,691.00
10% Contingency					\$127,169.10					\$1,398,860.10
						58,639	Totals	4.11	8.33	\$1,398,860.10

2021 MAIN ASPHALT ROADS PROGRAM - DRAFT										
<u>Street Name</u>	<u>From</u>	<u>To</u>	<u>Type</u>	PCI	Est. Cost	Area (SY)	Cost/SY	Length/CL Miles	Lane Miles	Runing Totals
Terex Rd.	Londonairy Blvd.	Nottingham Gate Blvd	Mill & Resurface	59	\$137,650.00	7,860.00	\$17.51	0.38	1.12	\$137,650.00
Terex Rd.	Nottingham Gate Blvd.	Barlow Rd.	Mill & Resurface	49	\$213,240.00	13,200.00	\$16.15	0.68	1.88	\$350,890.00
Terex Rd.	Barlow Rd.	#967 Terex Rd	Mill & Resurface	57	\$248,866.00	15,254.00	\$16.31	0.78	2.17	\$599,756.00
Terex Rd.	#967 Terex Rd	Road Split	Mill & Resurface	57	\$174,520.00	10,641.00	\$16.40	0.53	1.51	\$774,276.00
Terex Rd.	Road Split	Darrow Rd.	Mill & Resurface	57	\$174,157.00	10,099.00	\$17.24	1.00	1.43	\$948,433.00
10% Contingency					\$94,843.30					\$1,043,276.30
						68,921.00	Totals	4.05	9.79	

Total for 2021 = \$2,442,136.40