

**CITY OF NOVI CITY COUNCIL
DECEMBER 16, 2019**

SUBJECT: Consideration of approval to award design engineering services to AECOM Great Lakes, Inc. for reconstruction of Cranbrooke Drive between Ten Mile Road and Village Wood Road, in the amount of \$160,327.92.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

EXPENDITURE REQUIRED	\$ 160,327.92
AMOUNT BUDGETED	\$ 204,507
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	203-203.00-865.219

BACKGROUND INFORMATION: Cranbrooke Drive is a north-south residential collector road, east of Meadowbrook Road, which runs from Nine Mile Road to Ten Mile Road. In 2018, the full extent of Cranbrooke Drive received an average PASER rating of 3 to 4, which falls in the poor-fair category. At this PASER rating, preventative maintenance is no longer effective and reconstruction is necessary.

The section of Cranbrooke Road from Village Wood Drive and Ten Mile Road has been considered a reconstruction for several years. However, the road was also a potential route for the Great Lakes Water Authority (GLWA) water main redundancy project beginning in 2021. Recently, GLWA determined the route would not travel through the Cranbrooke corridor, and therefore would not conflict with a reconstruction project. Staff recommends moving this project forward to address a much needed road repair.

The Cranbrooke Road project will include concrete pavement reconstruction, aggregate base course, underdrain, driveway apron replacement, drainage improvements, roadway widening and the installation of a sump drain behind the back of curb from Village Wood Drive to Ten Mile Road.

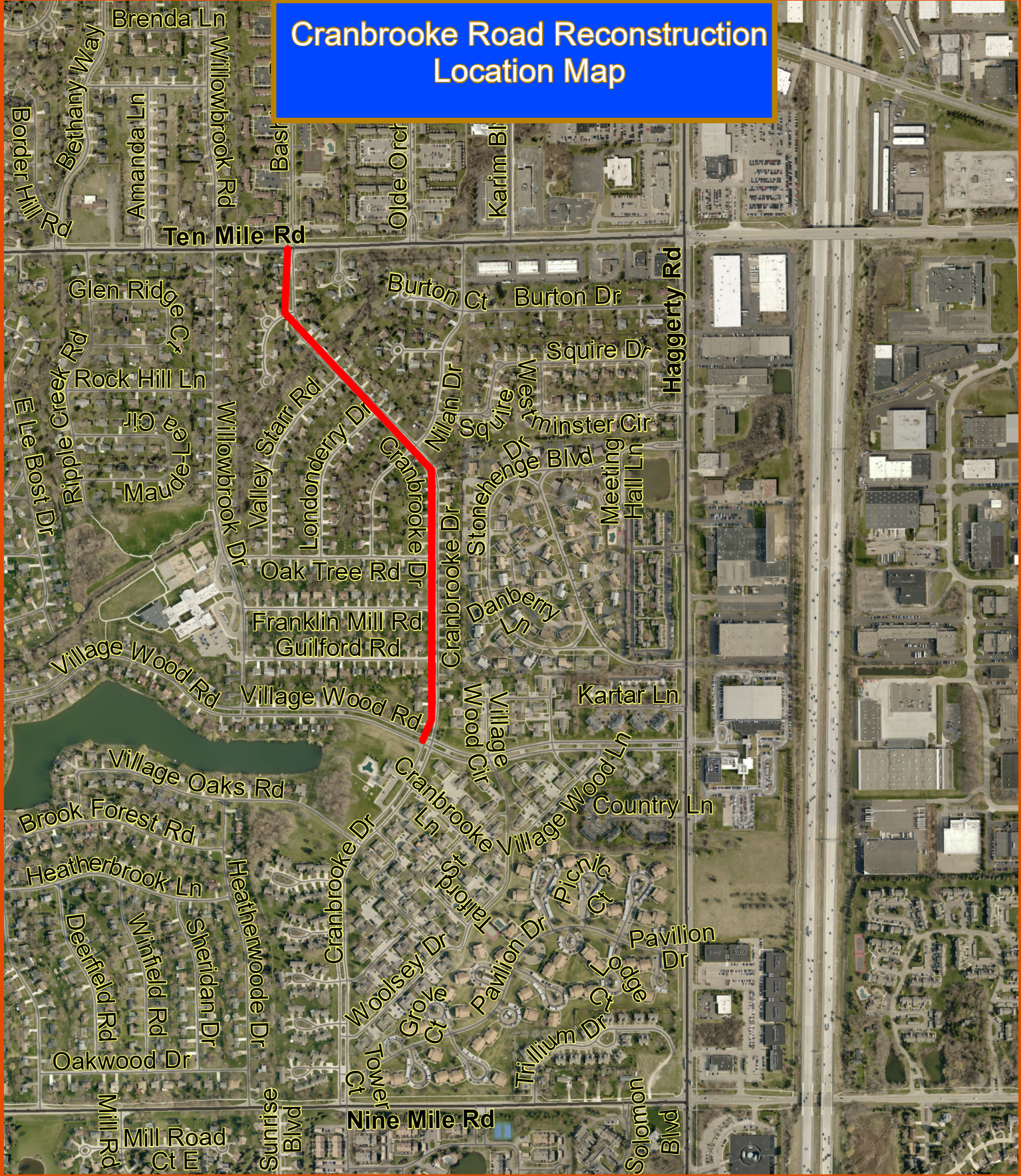
AECOM's engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects. The design fees for this project will be \$160,327.92, 6.25% of the estimated construction cost of

\$2,565,264.75. AECOM's proposal is enclosed and includes the project scope and schedule.

Design of this project would begin following award with construction estimated to begin in July 2020.

RECOMMENDED ACTION: Approval to award design engineering services to AECOM Great Lakes, Inc. for reconstruction of Cranbrooke Drive between Ten Mile Road and Village Wood Road, in the amount of \$160,327.92.

Cranbrooke Road Reconstruction Location Map



Map Author: Rebecca Runkel
 Date: 12-4-19
 Project: Cranbrooke Rd Recon
 Version #: 1.0

— Project Limits

MAP INTERPRETATION NOTICE
 Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate and should not be construed as survey measurements performed by a licensed Michigan Surveyor as defined in Michigan Public Act 132 of 1970 as amended. Please contact the City GIS Manager to confirm source and accuracy information related to this map.

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City of Novi
 Engineering Division
 Department of Public Works
 26300 Lee BeGole Drive
 Novi, MI 48375
cityofnovi.org



1 inch = 781 feet





November 26, 2019

Ms. Rebecca Runkel
City of Novi
Field Services Complex
26300 Lee Begole Drive
Novi, MI 48375

**Reference: Proposal for Engineering Services
Cranbrooke Dr. Reconstruction 10 Mile to Village Wood Rd**

Dear Ms. Runkel,

AECOM is pleased to submit this proposal for the above referenced project.

The work on Cranbrooke Drive includes concrete pavement reconstruction, aggregate base course, underdrain, driveway apron replacement, drainage improvements and the installation of a sump drain behind the back of curb from Village Wood Drive to 10 Mile Road. The roadway will be widened by 1 foot in each direction towards the median island. The longitudinal profile of the road will be reviewed and improved to increase positive drainage where allowed by the surrounding infrastructure. No work is included on the bridge over the Ingersol Creek.

The following tasks will be completed for the project:

Initial Meeting and Scope Verification

The intent of this task is to meet with the City and verify the limits and scope of work for the project. Upon completion of this task, we will move forward with the surveying and preliminary design.

Survey and Base Plans

The intent of this task is to provide topographic survey and base mapping as needed for the proposed design work. We anticipate that a full topographic survey will not be required for this project. Base drawings will be created using the aerial photos supplemented by the field survey data and a field review of the site.

AECOM will prepare base plans (30%-40% complete) to identify the major design features. These plans will also be used to further the utility investigation and resolution of potential conflicts and *geotechnical* investigations. Base plans will include the results of the survey information, utility information from response to our solicitations, and a preliminary estimate.

AECOM will distribute the base plan design set to the utility companies that have indicated that they have facilities in the project area. We will incorporate the additional information that utility companies provide to AECOM into the plan set.



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Preliminary Plans

Incorporating the information obtained from the above tasks, we will prepare the preliminary plan set (90%) in accordance with City requirements. This submittal will include items such as the typical cross sections, materials/quantities and details. A Project Manual and preliminary updated cost estimate will also be prepared and submitted.

Final Plans and Proposal

Incorporating comments from the City, AECOM will develop the final plans submittal, including the plan set, Project Manual, and cost estimate.

Advertising and Award

We will respond to any final comments received from the City and submit the Advertisement for Bids to the City for publication. Contract Documents will be made available to bidders by AECOM. AECOM will respond to bidder inquiries during the advertising period and prepare addenda as required. Following the bid opening AECOM will submit the Bid Tabulation and a letter with recommendations regarding contract award

Construction

AECOM will provide full time inspection, contract administration, and staking as required for the project.

Schedule

We anticipate that the following schedule can be maintained:

Notice To Proceed with Design	December 20, 2019
Final Plans Submittal	April 8, 2020
Advertise for Bids	April 15, 2020
Open Bids	May 6, 2020
Contract Award	May 20, 2020
Begin Construction	June 15, 2020
End Construction	October 31, 2020

Estimated Cost of Construction and Design Fees

The attached estimate show the construction cost for this project:

Cranbrooke Rd Estimate - \$2,565,246.75.

The design fee (using the Engineering Fee Schedule for Roadway Reconstruction) is 6.25%.

Design Fee = 6.25% x \$2,565,246.75 = \$160,327.92.

We understand that fees for construction phase services will be determined after a construction contract is awarded.



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Please contact me if you have any questions or wish to discuss this submittal.

Sincerely,

AECOM Great Lakes, Inc.

A handwritten signature in blue ink that reads "Sean Kelsch".

Sean Kelsch, PE
Vice-President

**City of Novi
Cranbrooke Drive
Full Reconstruction
Preliminary Estimate of Cost
12/10/2019**

Item No.	Item Description	Unit	Quantity	Unit Price (\$)	Total Cost (\$)
1	Mobilization (10%)	LS	1	\$ 233,204.25	\$ 233,204.25
2	Pre-Construction Audio-Visual	LS	1	\$ 3,000.00	\$ 3,000.00
3	Pavt, Rem	Syd	17,546	\$ 10.00	\$ 175,460.00
4	Subgrade Undercutting, Special (1 x 3)	Cyd	1,500	\$ 45.00	\$ 67,500.00
5	Roadway Grading	Sta	33.2	\$ 3,000.00	\$ 99,600.00
6	Silt Fence	Ft	6,500	\$ 10.00	\$ 65,000.00
7	Curb and Gutter Inlet Filter	Ea	34	\$ 250.00	\$ 8,500.00
8	Concrete, Non Reinf, with Integral Curb, 8 inch	Syd	18,100	\$ 60.00	\$ 1,086,000.00
9	Driveway, Nonreinf, Conc, 6 inch	Syd	901	\$ 45.00	\$ 40,545.00
10	Sidewalk, Rem	Syd	127	\$ 10.00	\$ 1,270.00
11	Sidewalk Ramp, Conc, 6 inch	Sft	1,143	\$ 7.50	\$ 8,572.50
12	Detectable Warning Surface	Ft	44	\$ 45.00	\$ 1,980.00
13	Underdrain, Subgrade, Open-Graded, 6 inch	Ft	6,850	\$ 13.00	\$ 89,050.00
14	Aggregate Base, 21AA Limestone, 6 inch	Syd	18,781	\$ 15.00	\$ 281,715.00
15	Permanent Signing	LS	1	\$ 5,000.00	\$ 5,000.00
16	Permanent Pavement Markings	LS	1	\$ 4,000.00	\$ 4,000.00
17	Maintaining Traffic	LS	1	\$ 20,000.00	\$ 20,000.00
18	Surface Restoration	LS	1	\$ 30,000.00	\$ 30,000.00
	Roadway Construction Subtotal				\$ 1,987,192.50
19	Dr Structure, Rem	Ea	9	\$ 450.00	\$ 4,050.00
20	Dr Structure, 24 inch dia	Ea	9	\$ 1,250.00	\$ 11,250.00
21	Dr Structure Cover	Ea	3	\$ 700.00	\$ 2,100.00
22	Dr Structure Cover, Adj, Case 1	Ea	17	\$ 650.00	\$ 11,050.00
23	Point Up Drainage Structure	Ea	17	\$ 300.00	\$ 5,100.00
24	Reconstruct Drainage Structure	Ft	34	\$ 200.00	\$ 6,800.00
25	Dr Structure, 48 inch dia	Ea	10	\$ 2,200.00	\$ 22,000.00
26	Dr Structure Cover, Type K	Ea	10	\$ 950.00	\$ 9,500.00
27	Dr Structure, Tap, 12 inch	EA	8	\$ 700.00	\$ 5,600.00
28	Sewer, CI E, 12 inch, Tr Det B	Ft	780	\$ 80.00	\$ 62,400.00
29	Sump Drain Installation	LS	1	\$ 205,000.00	\$ 205,000.00
	Drainage Items Subtotal				\$ 344,850.00
	Subtotal Construction Items + Mobilization				\$ 2,565,246.75
	RCOC Permit for 10 Mile Work				\$ 2,500.00
	Design Engineering (6.25%)				\$ 160,327.92
	Design Contingency (10%)				\$ 18,591.51
	Construction Engineering (4.75%)				\$ 121,849.22
	Crew Days	CD	145	\$ 700.00	\$ 101,500.00
	Geotechnical Design (0.9%)				\$ 23,087.22
	Materials Testing (1.9%)				\$ 48,739.69
	Construction Contingency (10%)				\$ 283,733.57
	Total Construction Cost				\$ 3,325,575.88

Assumptions

Rem/replace approx. 25% of Dr structures. Adjust approx. 50% of Dr structures. Recon approx 2' on 25% of Dr structures.
Widening the road both northbound and southbound by 1' into the median.
All driveway aprons included in order to be able to adjust the profile of road
Adding drainage elements north of Londonderry, north of Oak Tree, and north of Village Wood Rd