



CITY of NOVI CITY COUNCIL

Agenda Item L
August 13, 2018

SUBJECT: Approval to award civil engineering services to AECOM Great Lakes, Inc., for design engineering services associated with the Lakeshore Park Shoreline Erosion Control and Improvements project in the amount of \$13,661.92.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division
Parks, Recreational and Cultural Services

CITY MANAGER APPROVAL: 

EXPENDITURE REQUIRED	\$ 13,661.92
AMOUNT BUDGETED	\$ 192,509
APPROPRIATION REQUIRED	N/A
LINE ITEM NUMBER	400-691.00-977.025

BACKGROUND INFORMATION:

Lakeshore Park, located adjacent to Walled Lake, requires some shoreline repairs. City Engineering Consultant AECOM has submitted a proposal to provide the shoreline repair design as well as additional park improvements. The shoreline will be designed to protect against erosion with these repairs. Included in the park improvements are ADA ramps, concrete slabs under the picnic tables, and an emergency boat launch. AECOM will assist the City in acquiring MDEQ permits for construction of these improvements.

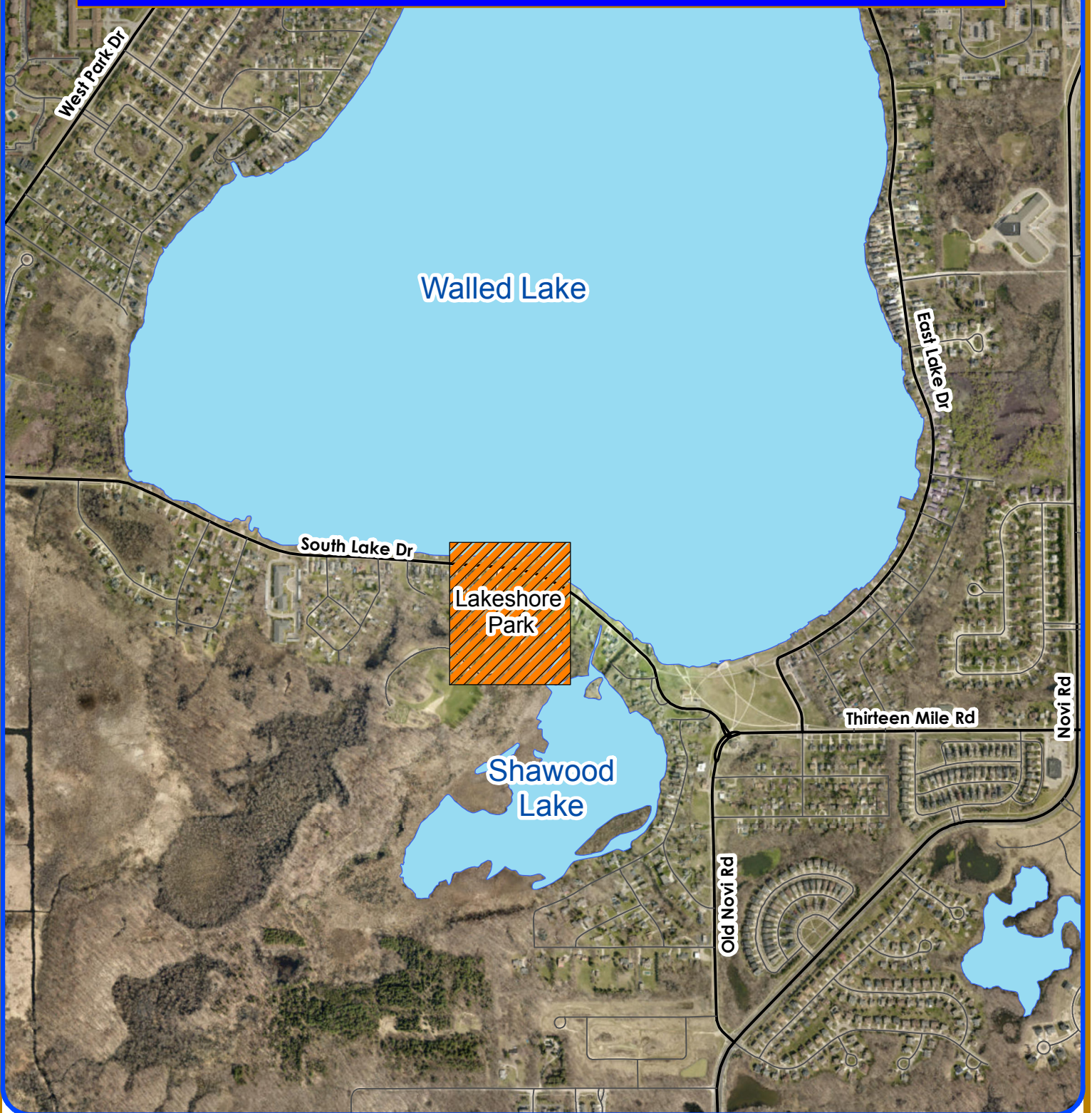
Erosion along the shoreline has occurred due to wave action and ice flow. While sand is added to the beach area annually, a long term stabilization solution is required for the park's lakefront areas.

The attached *Design Engineering Services* proposal, as executed by AECOM, outlines the scope of services in more detail. The design fee rate per the Exhibit B Fee Curve Schedule (as part of the City's general Engineering Services Contract with AECOM) is 11.00% for streambank restoration projects (storm sewer construction). The total amount of the project is \$13,661.92 The DPW Engineering Division has reviewed the scope of services proposal and recommends approval.

RECOMMENDED ACTION: Approval to award civil engineering services to AECOM Great Lakes, Inc., for design engineering services associated with the Lakeshore Park Shoreline Erosion Control and Improvements project in the amount of \$13,661.92.

Lakeshore Park Shoreline Erosion Control and Improvements

Location Map



Map Author: Joseph Akers
Date: July 23, 2018
Project: Lakeshore Park Improvements
Version: 1

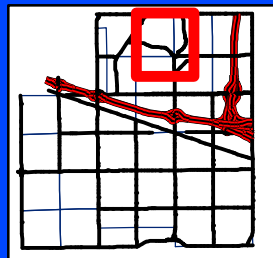
Amended By:
Date:
Department:

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.



Proposed Improvement Area



City of Novi

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



1 inch = 1,010 feet





July 28, 2018

Mr. Joseph Akers
City of Novi
Field Services Complex
26300 Lee Begole Drive
Novi, MI 48375

**Reference: Proposal for Engineering Services
Lakeshore Park**

Dear Mr. Akers,

AECOM is pleased to submit this proposal for the above referenced project at Lakeshore Park. In certain locations, the existing shoreline slope protection has suffered a large amount of erosion which requires repair. We understand that the project includes the following items:

Lakeshore Park

- Add ADA ramp at end of sidewalk at east end.
- Add concrete slab under picnic tables.
- Add a boat landing/launch for emergency use only. No docks are included.
- Assistance in obtaining new MDEQ permit for construction.
- Slope restoration where shore line has eroded.
- Design shoreline erosion protection:
 - No steel sheet piling allowed
 - No cement liners allowed.
 - Consider various stabilization techniques, including soil wrapped in geotextile liner, heavy riprap over geotextile liner, cobble blocks, etc.
 - Use new slope protection system to deter geese if possible.
 - An erosion analysis of the previous core log protection scheme.
- Assistance in obtaining new MDEQ permit for construction.

An estimate of costs is attached.

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. The need for additional improvements will also be identified and discussed at the meeting. 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 be required for the anticipated channel work included in the project. Base drawings will be created using the survey data, supplemented by aerial photos and a detailed field review of the site.



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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. Base plans will include the results of the survey information, utility information from response to our solicitations, and a preliminary estimate.

AECOM will obtain existing utility data with a design ticket through the MISS DIG system. In addition, 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. Due to the fast pace of this project, this may require an addenda during the bid phase.

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 creek 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 for the Creek Channel Lining work alone. If culvert replacement is needed, the MDOT permit would take approximately 6 weeks longer to obtain.

Request Soil Borings and Cores	None Required
Notice To Proceed with Design	September 31, 2018
Final Plans Submittal	December 15, 2018
MDEQ Permit Anticipated	February 28, 2019
Contract Award	April 15, 2019
Begin Construction	May, 2019
End Construction	July, 2019

Estimated Cost of Construction and Design Fees

The attached estimate shows the construction cost for the project is \$124,199.24.

The design fee is 11.00% of construction cost.



Mr. Joseph Akers
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$11.00\% \times \$124,199.24.00 = \$13,661.92.$

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

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". The signature is written in a cursive style and is positioned above a horizontal line.

Sean Kelsch, PE
Vice-President

City of Novi
Shoreline Erosion Control & Misc Improvements
Lakeshore Park
Preliminary Estimate of Cost
7/28/2018

Item No.	Item Description	Unit	Quantities	Unit Price (\$)	Total Cost (\$)
			Total	Unit Price (\$)	Total Cost (\$)
1	Mobilization (10%)	LS	1	11,290.84	\$ 11,290.84
2	Pre-Construction Audio-Visual	LS	1	1,500.00	\$ 1,500.00
3	Earth Excavation	Cyd	66	\$ 15.00	\$ 990.00
4	Heavy Riprap or Cobblestone	Syd	324	\$ 100.00	\$ 32,400.00
5	Sidewalk, Rem	Syd	12	\$ 12.00	\$ 144.00
6	Sidewalk, Conc, 6 inch	Sft	100	\$ 8.00	\$ 800.00
7	Sidewalk Ramp, Conc, 6 inch	Sft	50	\$ 10.00	\$ 500.00
8	Detectable Warning Surface	Ft	10	\$ 55.00	\$ 550.00
9	Remove Existing Boat Access Ramp, In Water	LS	1	-	\$ 5,000.00
10	Park Maintenance and Emergency Boat Access Ramp	Sft	1,500	\$ 30.00	\$ 45,000.00
11	Aggregate Base, Boat Launch, 6 inch	Syd	180	\$ 12.00	\$ 2,160.00
12	Concrete Pad for Picnic Table	Sft	400	\$ 10.00	\$ 4,000.00
13	Silt Fence	Ft	200	\$ 3.00	\$ 600.00
14	Turbidity Curtain	Ft	200	\$ 15.00	\$ 3,000.00
15	Maintaining Traffic	LS	1	\$ 3,000.00	\$ 3,000.00
16	Surface Restoration	LS	1	\$ 3,000.00	\$ 3,000.00
	Miscellaneous Items (10%)				\$ 10,264.40
	Total Construction Cost				\$ 124,199.24
	Design Engineering	LS	11.00%		\$13,661.92
	Geotechnical Investigation	LS	-	-	\$0.00
	Inspection (Crew Days)	Day	20	\$700.00	\$14,000.00
	Contract Administration	LS	7.50%		\$9,314.94
	Materials Testing	LS	1	\$ 2,500.00	\$2,500.00
	Total Estimated Cost				\$163,676.10

Estimate Assumptions:

15' wide by 100' long emergency Park Maintenance boat access assumed (40 feet is in water)



Lakeshore east beach end meeting shoreline (July 2015)



Lakeshore east beach end meeting shoreline (Sept. 2017)



Lakeshore east shoreline (Sept. 2017)



Lakeshore west shoreline (Sept. 2017)