



**CITY OF NOVI CITY COUNCIL  
DECEMBER 20, 2021**

**SUBJECT:** Consideration of approval to award engineering design services to OHM Advisors for water main replacement, road restoration, and sanitary sewer lining within the Howell's Walled Lake neighborhood in the amount of \$153,120 and amend the budget.

**SUBMITTING DEPARTMENT:** Department of Public Works, Engineering Division

<b>EXPENDITURE REQUIRED</b>	<b>\$ 153,120.00</b>
<b>AMOUNT BUDGETED</b>	<b>\$ 0</b>
<b>APPROPRIATION REQUIRED</b>	<b>\$ 3,137,173.00</b>
<b>LINE ITEM NUMBER</b>	<b>592-592.00-976.099</b>

**BACKGROUND INFORMATION:**

This project includes water main replacement, road restoration, and sanitary sewer lining in Howell's Walled Lake subdivision. Howell's Walled Lake subdivision is comprised of Wainwright Street, Linhart Street, Martin Avenue, and Paramount Street. The existing water main was installed when the subdivision was built in the 1970s and has a history of water main breaks and failing valves. Replacing the pipe will address age and maintenance concerns and will improve system reliability. Approximately 4,000 feet of water main will be replaced with new 8-inch ductile iron pipe via open trench installation. Due to the anticipated disturbance of the existing roadways, restoration of the roads throughout the subdivision will occur after water main is installed. Roadside ditches will be regraded, and driveway culverts replaced to improve drainage. Additionally, portions of the sanitary sewer in the subdivision have been identified for lining, which will extend the service life of the sanitary sewer.

The attached design engineering services proposal outlines the detailed scope of services. The design fee for this project will be \$153,120 (6.25% of the estimated construction cost of \$2,450,000). OHM Advisor's engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects.

Staff identified the need for water main replacement during the design phase of the recent storm water project completed last fall in the same area. Combining all the included infrastructure improvements before restoring the road makes sense economically and systematically. Therefore, the project is being pulled forward and requires a budget amendment from the Water/Sewer fund balance. Design of this project would begin following award with construction expected to start in June 2022.

**RECOMMENDED ACTION:** Approval to award engineering design services to OHM Advisors for water main replacement, road restoration, and sanitary sewer lining within the Howell's Walled Lake neighborhood in the amount of \$153,120 and amend the budget.

**RESOLUTION**

NOW, THEREFORE BE IT RESOLVED that the following Budget Amendment for anticipated total project costs related to Howell's Walled Lake neighborhood water main replacement, road restoration, and sanitary sewer lining including engineering design services to OHM Advisors is authorized:

	<b>INCREASE (DECREASE)</b>
<b>WATER &amp; SEWER FUND</b>	
<b>APPROPRIATIONS</b>	
Capital Outlay	3,137,173
<b>TOTAL APPROPRIATIONS</b>	<u><b>\$ 3,137,173</b></u>
<b>Net Increase (Decrease) to Fund Balance</b>	<u><u><b>\$ (3,137,173)</b></u></u>

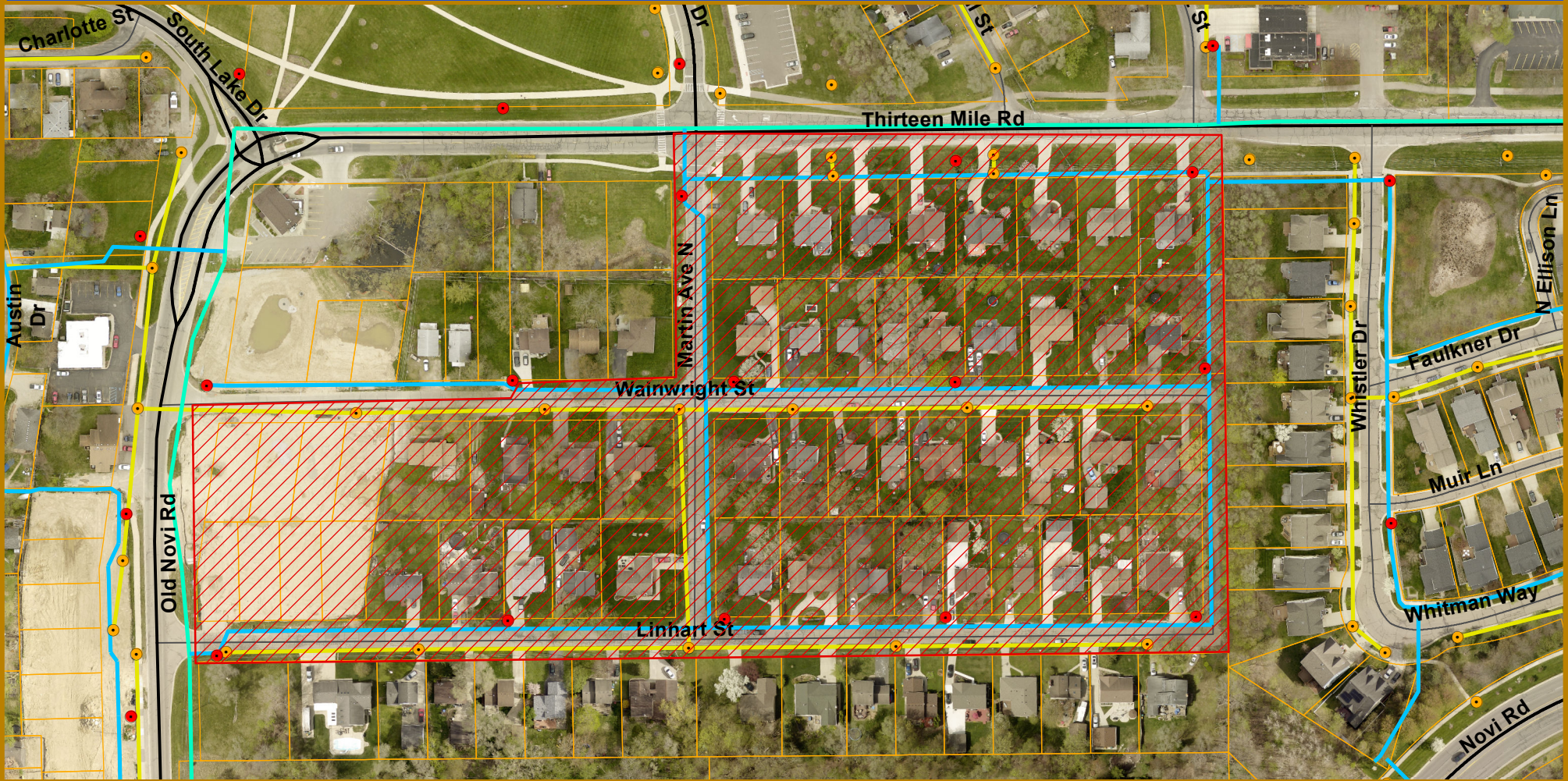
I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Novi at a regular meeting held on December 20, 2021.

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Cortney Hanson  
City Clerk

# Howell's Walled Lake Subdivision Water Main Replacement, Road Improvements and Sanitary Sewer Lining







## Location Map

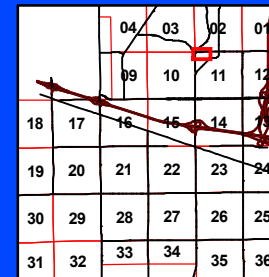


Map Author: Rebecca Runkel  
 Date: 12/8/2021  
 Project: Howell's Walled Lake WM-Road-San  
 Version #: 1.0

### MAP INTERPRETATION NOTICE

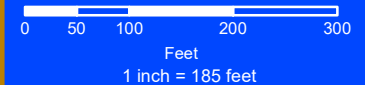
Map information depicted is not intended to replace or substitute for any official or primary source. This map was intended to meet National Map Accuracy Standards and use the most recent, accurate sources available to the people of the City of Novi. Boundary measurements and area calculations are approximate 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.

Legend		Water Main Online	
	Project Area		8"
	Sanitary Manhole		36"
	Water Hydrant		
	8" Sanitary		



## City of Novi

Engineering Division  
 Department of Public Works  
 26300 Lee BeGole Drive  
 Novi, MI 48375  
[cityofnovi.org](http://cityofnovi.org)





December 2, 2021

Mr. Ben Croy, P.E.  
City Engineer  
City of Novi, Department of Public Works  
26300 Lee Begole Drive  
Novi, MI 48375

**RE: Scope of Design Services  
Howell's Walled Lake Subdivision Water Main and Road Restoration**

Dear Mr. Croy:

Per your request, the following outlines our proposed scope of services and fee to perform design services to prepare plans and specifications for the above referenced project. This summary includes our project understanding, proposed scope of work, assumptions, schedule, and fee.

### PROJECT UNDERSTANDING

The project will consist of water main replacement and roadway improvements within the Howells's Walled Lake neighborhood, which includes Wainwright Street, Linhart Street, and Martin Avenue. The existing water main was installed in the 1970's when the subdivision was built and the City desires to replace it due to age, maintenance needs, and to improve system reliability. The project will include construction of approximately 4000 feet of 8-inch ductile iron water main via open trench installation. It should be noted that new water main was recently installed along the west portion of Wainwright as part of the Lakeview development. Due to the available right-of-way and location of other utilities, it is anticipated that the new water main will be located within the roadways throughout the remainder of the subdivision.

Due to the disturbance of the existing roadways to complete the water main construction, the project will also include reconstruction of the roadways throughout the subdivision. This will include a new asphalt pavement section on Wainwright, Linhart, and Martin as well as Paramount. The project will also include re-grading of roadside ditches and replacement of driveway culverts as needed to improve drainage. As you are aware, the existing pavement on Martin was removed as part of the recent storm sewer project along that route. In addition, several runs of sanitary sewer have been identified for lining and have been included in the project. The total project is anticipated to cost approximately \$3.1 million

### SCOPE OF SERVICES

The following outlines our work plan to accomplish the scope of services for this project as noted above:

- Organize and attend a kickoff meeting with City staff and utility companies to review project objectives, prepare design criteria, and establish a specific delivery schedule.
- Implement existing utility information and record drawings for the project area.
- Perform a site review to identify elements that are sensitive which includes including driveway locations, utility facilities, drainage features, access issues, etc.
- Perform topographic survey of the project area and prepare existing conditions plans.



- Coordinate with the Geotechnical Engineer to develop typical pavement sections for the project.
- Develop horizontal and vertical alignments of the roadway and prepare typical cross-sections for the roadway.
- Perform engineering for the installation of new water main along the route, road reconstruction, ditch grading, and sewer lining. Determine pipe sizing, grading limits, road impacts, staging, utility conflicts, etc.
- Update construction cost estimate to the preliminary stage, based on this level of design.
- Meet with the City and confirm preliminary route for water main and confirm locations that may require easements and/or temporary grading permits for the project. Confirm staging considerations and traffic control/detours for road closures, temporary roads, utility impacts, etc. for water main installation, road reconstruction, ditch grading, and sewer lining.
- Prepare design plans and specifications for the project improvements for City review.
- Prepare applications and plans for the water main permit.
- Prepare proposed preliminary schedule for work including the construction start, substantial completion, and final completion dates.
- Prepare SESC plan sheets and permit application.
- Attend one meeting with the City to review the plans and specifications and address any requested revisions.
- Prepare final bid set documents for the project.
- Assist the City with advertising and soliciting bids, printing and distributing bidding documents to interested bidders, tabulating and reviewing the bids, checking contractor references and providing a recommendation of the award of the project construction to a qualified contractor.

## SCHEDULE

The following outlines our anticipated schedule milestones of main tasks related to this work:

- 30% plans – February 2021
- 100% plans – March 2021
- Prepare Bid Recommendation for Council Award – April 2021
- Tentative Construction Start – April/May 2021
- Tentative Construction Completion – July 2021

This schedule is based upon an authorization to proceed given by January 10, 2022.

## ASSUMPTIONS

The following summarizes our assumptions associated with this proposal:

- The City will be responsible for all permit application fees and permit fees.
- The proposed work will be done within existing right-of-way. Additional right-of-way and/or easements are not anticipated, but if required the will acquire.
- We do not anticipate remediation or removal of contaminated or hazardous soils or materials.
- Development of plans for landscaping or ornamental features are not included.
- Geotechnical services are anticipated to be required for design and construction of this project but are not included in our scope of work. These services will be provided by the City's Geotechnical Consultant under a separate contract.
- Design for private utility relocation or repair is not included. We do anticipate coordinating with Consumers on replacement of gas main and services throughout the project area.
- In the event any additional services are required by OHM Advisors, an addendum to the supplemental engineering agreement will be submitted for your approval prior to performing said services.



**FEE**

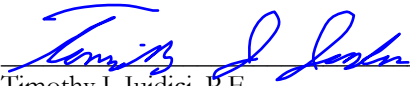
Based on the fee schedule in the Civil Engineering Consulting Services Agreement between the City and OHM Advisors, the proposed fee for this project is established as follows:

- Design Fee at 6.25% of construction cost (\$2,450,000) = \$153,125.00

Thank you for the opportunity to be of service. If you have any questions or require additional information, please contact us. We look forward to working with you on this project.

Sincerely,  
**OHM Advisors**

Authorization to Proceed

  
\_\_\_\_\_  
Timothy J. Juidici, P.E.  
Principal-in-Charge

\_\_\_\_\_  
Signature Date

\_\_\_\_\_  
Printed Name Title

Encl: Cost Estimate

cc: Jeff Herczeg, Director of Public Works  
Steve Siklich, OHM  
File

**CITY OF NOVI**  
**HOWELL'S WALLED LAKE SUBDIVISION**  
**Probable Estimate of Cost**  
**Water Main and Road Improvements**

11/30/2021

Item No.	Item Description	Unit	Quantity	Unit Price (\$)	Item Cost (\$)
1	Mobilization, Max 5%	LS	1.00	\$ 117,000.00	\$ 117,000.00
2	Traffic Maintenance and Control	LS	1.00	\$ 20,000.00	\$ 20,000.00
3	Audio Video Route Survey	LS	1.00	\$ 3,500.00	\$ 3,500.00
4	Erosion Control	LS	1.00	\$ 2,000.00	\$ 2,000.00
5	Water Main, Abandon with Flowable Fill	LS	1.00	\$ 30,000.00	\$ 30,000.00
6	Pavt, Rem	Syd	8600.00	\$ 18.00	\$ 154,800.00
7	Tree, Rem	Ea	2.00	\$ 750.00	\$ 1,500.00
8	Mailbox, Remove, Salvage and Replace	Ea	35.00	\$ 200.00	\$ 7,000.00
9	Maintenance Aggregate, 21AA	Syd	1600.00	\$ 17.00	\$ 27,200.00
10	Aggregate Base, 21AA, 6 inch	Syd	1600.00	\$ 17.00	\$ 27,200.00
11	Aggregate Base, 21AA, 8 inch	Syd	7000.00	\$ 17.00	\$ 119,000.00
12	Water Main, Class 54, DI, 8 inch, Tr Det F	Ft	600.00	\$ 120.00	\$ 72,000.00
13	Water Main, Class 54, DI, 8 inch, Tr Det G	Ft	3400.00	\$ 135.00	\$ 459,000.00
14	Connection to Existing Water Main	Ea	4.00	\$ 5,000.00	\$ 20,000.00
15	Gate Valve and Well, 8 inch	Ea	9.00	\$ 5,750.00	\$ 51,750.00
16	Fire Hydrant	Ea	10.00	\$ 6,000.00	\$ 60,000.00
17	Water Services - Short	Ea	40.00	\$ 1,400.00	\$ 56,000.00
18	Water Services - Long	Ea	35.00	\$ 2,500.00	\$ 87,500.00
19	Trench Undercut and Backfill	Cyd	530.00	\$ 60.00	\$ 31,800.00
20	Culv End Sect, 12 inch	Ea	90.00	\$ 400.00	\$ 36,000.00
21	Culv, CI A, CSP, 12 inch	Ft	1000.00	\$ 60.00	\$ 60,000.00
22	Bypass Pumping, Furnish, Operate and Remove	LS	1.00	\$ 7,500.00	\$ 7,500.00
23	Sanitary Sewer Cleaning and Prep, 8 inch	Ft	500.00	\$ 4.50	\$ 2,250.00
24	Sanitary Sewer Video Inspection, 8 inch	Ft	500.00	\$ 2.00	\$ 1,000.00
25	CIPP Liner, 8 inch, Full Length	Ft	500.00	\$ 50.00	\$ 25,000.00
26	Manhole Lining	Vft	40.00	\$ 275.00	\$ 11,000.00
27	Lateral Reinstatement	Ea	16.00	\$ 250.00	\$ 4,000.00
28	Final Deliverables, CIPP Liner	LS	1.00	\$ 500.00	\$ 500.00
29	Conc Pavt, Nonreinf, 6 inch, Driveway	Syd	1200.00	\$ 75.00	\$ 90,000.00
30	HMA, 5EML, 1.5 inch, Driveway	Syd	400.00	\$ 45.00	\$ 18,000.00
31	HMA, 3C, 2.5 inch, Driveway	Syd	400.00	\$ 55.00	\$ 22,000.00
32	HMA, 5EML, 1.5 inch, Roadway	Syd	7000.00	\$ 45.00	\$ 315,000.00
33	HMA, 3C, 2.5 inch, Roadway	Syd	7000.00	\$ 55.00	\$ 385,000.00
34	Ditch Grading	Ft	2500.00	\$ 20.00	\$ 50,000.00
35	Landscaping, Remove and Replace	LS	1.00	\$ 15,000.00	\$ 15,000.00
36	Restoration	LS	1.00	\$ 60,000.00	\$ 60,000.00
	Construction Subtotal				\$ 2,450,000.00
	Contingency	%	10%		
	<b>Construction Total</b>				<b>\$ 2,695,000.00</b>
	Design Engineering*	% Fee	6.25%		\$153,125.00
	Geotechnical Investigation	% Fee	0.9%		\$22,050.00
	Inspection (Crew Days)	CD	100.00	\$ 700.00	\$70,000.00
	Contract Administration*	% Fee	4.50%		\$110,250.00
	Materials Testing*	% Fee	1.9%		\$46,550.00
	<b>Total Estimated Cost</b>				<b>\$ 3,097,000.00</b>

Estimate Assumptions:

Estimate does not include utility coordination/relocation costs, easement costs, or permit costs.

\* Per 'Attachment A' of the 2017-2022 Engineering Fee Table