



CITY of NOVI CITY COUNCIL

**Agenda Item G
August 27, 2018**

SUBJECT: Approval to award civil engineering services to OHM Advisors for design engineering services associated with the 12 Mile Road and Novi Road Intersection Reconstruction project in the amount of \$71,665.44.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

CITY MANAGER APPROVAL: 

EXPENDITURE REQUIRED	\$ 35,832.72 City Share \$ 35,832.72 RCOC Share \$ 71,665.44 Total
AMOUNT BUDGETED	\$ 72,000
APPROPRIATION REQUESTED	\$ 0
LINE ITEM NUMBER	204-204.00-865.032

BACKGROUND INFORMATION:

The 12 Mile Road and Novi Road intersection is under the jurisdiction of the Road Commission for Oakland County (RCOC). The RCOC originally planned to reconstruct the intersection in FY2021 by utilizing National Highway Performance Program (NHPP) funding; however, the condition of the intersection prompted the City to propose advanced reconstruction in collaboration with the RCOC in 2019.

All sidewalk ramps, landings, and curb openings will be reconstructed as part of the project to meet current ADA standards. Pedestrian pushbuttons and pedestrian signal heads will also be replaced with current LED countdown heads per current standards. In addition, the crowned pavement that currently exists through the intersection on Novi Road will be flattened in order to improve rideability and motorist safety along 12 Mile Road. Topographic surveying will also be required due to discrepancies in the original intersection design drawings.

The RCOC (in collaboration with the City) will enter into a 50/50 funding agreement for the preliminary design engineering of the project. Consideration of the agreement is elsewhere on the agenda. Since the project involves federal funding, it will be administered and placed out for bid by the RCOC through MDOT's Local Agency Program. The RCOC will be performing all construction engineering, contract administration, and materials testing necessary to construct the project. In order to advance construct the project in 2019, the City will need to pay 100% of the construction costs.

The City and RCOC will enter into a separate local agency agreement for the advance construction and the City will be reimbursed construction costs when the NHPP funding becomes available in FY2021 (October 1, 2020).

The attached *Design Engineering Services* proposal, as executed by City Consulting Engineers, OHM Advisors, outlines the scope of services in more detail. The design fee rate per the proposal is 12.00% for intersection reconstruction. The fee rate is derived from the nonstandard cost sharing with RCOC. The design cost of the project is \$71,665.44 (12.00% of \$597,212.00). The Engineering Division has reviewed the scope of services proposal and recommends approval.

RECOMMENDED ACTION: Approval to award civil engineering services to OHM Advisors for design engineering services associated with the 12 Mile Road and Novi Road Intersection Reconstruction project in the amount of \$71,665.44.

12 Mile Road and Novi Road Intersection Reconstruction

Location Map

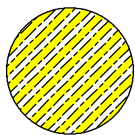


Map Author: Joseph Akers
Date: August 10, 2018
Project: 12 Mile and Novi Intersection
Version #: 1

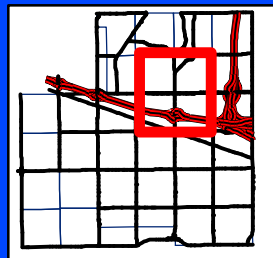
Amended By:
Date:
Department:

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
Intersection
Reconstruction



City of Novi

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



1 inch = 1,259 feet





ARCHITECTS. ENGINEERS. PLANNERS.

July 30, 2018

George D. Melistas
Engineering Senior Manager
City of Novi
26300 Lee BeGole Drive
Novi, MI 48375

**RE: Scope of Design Services
12 Mile Road and Novi Road Intersection Reconstruction**

Dear Mr. Melistas:

The Road Commission for Oakland County (RCOC) is planning to reconstruct the 12 Mile and Novi Road intersection in FY2021 by utilizing National Highway Performance Program (NHPP) funding. However, the City through collaboration with the RCOC, is proposing to advance the construction of the intersection to the 2019 construction season. The project will be administered through MDOT’s Local Agency Program (LAP) and in accordance with MDOT LAP procedures.

OHM Advisors has prepared the attached a Scope of Services (Exhibit A) for your consideration. Work will be performed through our existing as-needed contract with the City of Novi Department of Public Works. If this proposal is acceptable to you, a signature below will serve as our authorization to proceed.

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,

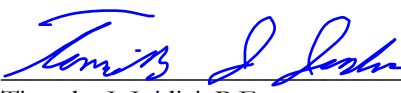
OHM Advisors

Authorization to Proceed



John R. Katers, P.E.
john.katers@ohm-advisors.com
D: 734.466.4448

Signature Date



Timothy J. Juidici, P.E.
tim.juidici@ohm-advisors.com
D: 248.751.3104

Printed Name Title



EXHIBIT A

Scope of Design Services 12 Mile Road and Novi Road Intersection Reconstruction City of Novi

A. Proposed Improvements and Project Limits

- ▼ The City of Novi in cooperation with the Road Commission for Oakland County (RCOC) is planning to reconstruct the 12 Mile Road and Novi Road intersection. The goal of the project is to remove and replace the deteriorated concrete pavement within the intersection. The permanent lane configuration will remain as it exists today. The limits of roadway reconstruction include the following:
 - North and South Legs: end of asphalt / start of concrete pavement; portions of the driveway approach in the NE quadrant is deteriorated and will be reconstructed
 - East Leg: approximately 50 feet east of the crosswalk
 - West Leg: approximately 25 feet west of the crosswalk for mainline pavement, since pavement on the west leg was recently repaired. However, the EB to WB crossover will be reconstructed as a part of this 2019 construction project.

- ▼ The proposed cross slope for Novi Road within the 12 Mile intersection will be reduced (flattened) compared to the existing condition to improve rideability and safety for eastbound and westbound 12 Mile Road traffic. Additional catch basins might be necessary to account for the flatter cross slope.

- ▼ Deteriorated curb and gutter and those portions impacted by proposed sidewalk ramp or drainage improvements will be replaced. In general, the existing curb and gutter is in good condition and most of it will remain in-place.

- ▼ The existing drainage system is an enclosed system. Only minor improvements are anticipated such as drainage structure cover adjustments and the placement of two or less drainage structures within the curbline.

- ▼ Pedestrian crossings exist at all legs of the boulevard intersection. By preliminary inspection, none of the twelve (12) existing sidewalk ramps meet current Americans with Disabilities (ADA) standards in terms of ramp/landing configuration and the location of the pedestrian pushbuttons. The twelve (12) sidewalk ramps, landings, and pushbuttons will be reconstructed to comply with current ADA standards as a part of the project. Pedestrian signal heads will also be replaced with LED countdown heads to meet current standards. Current MDOT and RCOC road design details will be used for ramp and pushbutton upgrades. Sidewalk ramps and landings will tie-in to existing sidewalk within 15+/- feet of the landing.

B. Project Scope

- ▼ **Kickoff Meeting/Coordination** - We will meet with the RCOC and Novi to initiate the design phase. This meeting will introduce the project team and identify key stakeholder concerns. Key project issues will be discussed with preliminary strategies to address the optimal approach.

- ▼ **Crash Data**
 - As required by the MDOT LAP process, OHM will evaluate crash data from 2013 to 2017 for current safety performance within the intersection. OHM will look for crash patterns that are correctable within the scope of the project. We will prepare a memo summarizing our findings.



▼ **Topographic Survey**

- The topographic survey will entail:
 - Behind the roadway traveled edge – Full surface topo from the edge of traveled way up to 10 feet beyond the right-of-way, up to 50 feet beyond the construction limits at each leg.
 - Within the boulevard median – Full surface topo, up to 50 feet beyond the 12 Mile Road construction limits
 - Within Novi Road pavement – Crown shots every 25 feet, excluding within the 12 Mile Road traveled lanes.
 - Within 12 Mile Road pavement (traveled way) – No topo.
 - Pickup of above ground utilities, pipe depths for public utility manholes within the greenbelt only, road surface shots as described above, trees, fences, property irons (if visible), roadside drainage features and other pertinent features. Existing information, including storm sewer or other utility features, beyond the limits described above will be obtained from as-built information.

▼ **ROW Parcel Exhibits, ROW Coordination and As-Needed ROW Mitigation**

- Based on our understanding of the existing right-of-way location, we assume that the parcel in the NE quadrant will require a Highway Easement for the traffic signal and sidewalk. We will provide up to 1 aerial view exhibits (11x17 or roll plot) for RCOC's use in ROW negotiations.

▼ **Plans, Specs, and Estimates (PS&E) Package**

- Removal and construction sheets will be 30 scale for full-size sheets, 60 scale for half-size sheets. We anticipate 1 road plan sheet cut. Profile sheets will not be prepared. Vertical information will be depicted on detailed grading sheets.
- We assume that one additional meeting will be necessary to coordinate design issues. Other correspondence will occur via email and phone.
- OHM will prepare the Programming Application on behalf of the City of Novi and the RCOC.
- OHM will prepare a pavement design, based on existing as-built information and RCOC standards. As confirmed with RCOC, no soil borings or pavement cores will be obtained. If the City elects to obtain pavement cores and soil borings separately, that information will be utilized for the project.
- Traffic signals will remain as is, other than the pushbutton and pedestrian head replacements.
- Permanent signs will remain as is. Pavement markings will be replaced.
- OHM will deliver plans for Novi and the RCOC and others to review at the following milestones:
 - **Road Base plans:** Plans include: line, grade, slope stake, and typical cross sections. Submit a crash analysis summary.
 - **Pre-GI plans:** GI-level plans for Novi and the RCOC review. Comments received from this review will be incorporated into the GI plans to be sent to MDOT.
 - **MDOT GI Plans:** OHM will submit the GI package to MDOT. The package will include plans, unique project specifications, soil borings, and opinion of probable cost.
 - **Pre-Final Plans:** OHM will submit the final package to Novi and the RCOC for review and comment. OHM will make revisions accordingly.
 - **Final Plans:** OHM will submit the final package to MDOT.
 - **Bid Plans:** OHM will submit the bid package to MDOT. The package will include plans, unique project specifications, and an .xml file of the opinion of probable cost.
 - **Project Reviews:** Project reviews will occur over email and phone, except the MDOT GI meeting.



- OHM will attend the **Pre-Construction Meeting**.
- **Final deliverables** package includes cad files and design calculations

▼ **Maintenance of Traffic**

- OHM will prepare Maintenance of Traffic plans based on the following assumptions:
 - Multiple phases will be necessary to maintain access through the intersection and large retail developments adjacent to the intersection. One (1) coordination with Novi and the RCOC will be necessary to discuss feasible options for maintaining traffic. In addition, coordination via email and over the phone will be necessary to arrive at the chosen option. We anticipate that the RCOC and/or Novi will communicate directly with the various retail centers in the area to arrive at constraints relating to the duration, frequency, and timing of the proposed construction.
 - At least one (1) lane of through traffic in each direction will be maintained on 12 Mile Road and Novi Road throughout the project.
 - A temporary signal will not be necessary. Temporary traveled lanes will reside under existing signal heads in the same direction as existing.
 - An MDOT permit will be necessary for construction signs within the I-96 right-of-way. OHM will prepare the MDOT permit for the RCOC to submit.
- OHM will follow the “MDOT Work Zone Safety and Mobility Guide for Local Agencies” and fill out MDOT Form #0369 as a part of the GI package.

▼ **Utility Coordination**

- OHM recognizes that there will be effort to identify utility impacts. OHM will:
 - Notify each utility company of the work planned for the project.
 - Verify location of facilities using record information provided by utility companies.
 - Coordinate 1 meeting with utilities. The meetings could be on-site, off-site or a conference call.
 - Identify impacts to utility facilities. No public or private utility relocations are anticipated.
 - Prepare utility coordination clause specification.

▼ **Public Involvement**

- No public meetings are anticipated.

▼ **Permits** - OHM will prepare an MDOT permit for construction signing for the RCOC to submit.

C. Schedule

The proposed project is targeting a May 2019 letting, provided that third party issues (right-of-way, utilities, permitting, etc.) are resolved. Roadway construction will be complete in 2019. To meet the MDOT letting, we propose the following schedule:

- ▼ Base Plans: October 8, 2018
- ▼ Pre-GI Plans for Review: November 26, 2018
- ▼ GI Submittal to MDOT: December 10, 2018
- ▼ Pre-Final Plans for Review: February 8, 2019
- ▼ Final Plans and ROW Certification: February 22, 2019
- ▼ Bid Plans to MDOT: March 22, 2019
- ▼ MDOT Letting: May 3, 2019
- ▼ Contract Completion: November 30, 2019



D. Compensation

The services outlined above will be performed on a lump-sum basis, for a total fee of seventy-one thousand six hundred sixty-five dollars (\$71,665.00). This amount is based on the estimate of probable construction cost and the assumptions listed above. The City will be invoiced for services on a monthly basis according to our percent complete on the project. The current construction project cost opinion is \$690,000.

E. Exclusions

- ▼ Soil borings or pavement cores (may be done by others)
- ▼ NPDES permit
- ▼ Storm sewer videotaping
- ▼ Preparation of Design Variance or Design Exception documents
- ▼ Construction engineering or assistance
- ▼ Title search

CITY OF NOVI
12 Mile & Novi Road Intersection
Probable Estimate of Cost
7/27/2018

Concrete Pavement Replacement, ADA Ramp Upgrades

Item No.	Item Description	Unit	Quantity	Unit Price (\$)	Item Cost (\$)
1	Mobilization (10%)	LS	1.00	\$ 54,292.00	\$ 54,292.00
2	Pre-Construction Audio-Visual	LS	1.00	\$ 1,500.00	\$ 1,500.00
3	Pavt, Rem	Syd	3950.00	\$ 10.00	\$ 39,500.00
4	Curb and Gutter, Rem	Ft	320.00	\$ 12.00	\$ 3,840.00
5	Sidewalk, Rem	Syd	230.00	\$ 8.00	\$ 1,840.00
6	Subgrade Undercutting	Cyd	200.00	\$ 50.00	\$ 10,000.00
7	Aggregate Base, 6 inch	Syd	250.00	\$ 9.00	\$ 2,250.00
8	Aggregate Base	Ton	100.00	\$ 40.00	\$ 4,000.00
9	Conc Pavt, Nonreinf, 10 inch	Syd	3950.00	\$ 75.00	\$ 296,250.00
10	Curb and Gutter, Conc	Ft	150.00	\$ 20.00	\$ 3,000.00
11	Sidewalk, Conc, 6 inch	Sft	500.00	\$ 8.00	\$ 4,000.00
12	Sidewalk Ramp, Conc, 6 inch	Sft	1500.00	\$ 10.00	\$ 15,000.00
13	Detectable Warning Surface	Ft	100.00	\$ 40.00	\$ 4,000.00
14	Curb Ramp Opening, Conc	Ft	170.00	\$ 22.00	\$ 3,740.00
15	Rem & Replace Driveway to Cemetery	LS	1.00	\$ 5,000.00	\$ 5,000.00
16	Pushbuttons & Pedestrian Signal Heads	LS	1.00	\$ 35,000.00	\$ 35,000.00
17	Traffic Detection (loop or camera)	LS	1.00	\$ 13,000.00	\$ 13,000.00
18	Marking & Signing	LS	1.00	\$ 7,500.00	\$ 7,500.00
19	Concrete Joints	LS	1.00	\$ 12,000.00	\$ 12,000.00
20	Storm/Drainage Improvements	LS	1.00	\$ 15,000.00	\$ 15,000.00
21	SESC	LS	1.00	\$ 1,500.00	\$ 1,500.00
22	Maintaining Traffic	LS	1.00	\$ 60,000.00	\$ 60,000.00
23	Turf Establishment	LS	1.00	\$ 5,000.00	\$ 5,000.00
	Construction Subtotal				\$ 597,212.00
	Contingency	%	15%		\$ 89,581.80
	Construction Total				\$ 686,793.80
	Design Engineering*	% Fee	12.00%		\$71,665.44
	Geotechnical Investigation	LS	0.00	\$ -	\$0.00
	Inspection (Crew Days)**	CD	0.00	\$700.00	\$0.00
	Contract Administration**	% Fee	0.00%		\$0.00
	Materials Testing**	LS	0.00	\$ -	\$0.00
	R.O.W. Acquisition**	LS	0.00	\$ -	\$0.00
	Permitting**	LS	0.00	\$ -	\$0.00
	Total Estimated Cost				\$ 758,459.24

Estimate Assumptions:

* 50/50 Cost Share City of Novi/RCOC

** RCOC to perform all CE/CA, testing, permitting, ROW for the project