



CITY OF NOVI CITY COUNCIL
JUNE 5, 2023

SUBJECT: Consideration of approval to award engineering design services to OHM Advisors for the rehabilitation of Nine Mile Road from Meadowbrook Road to Haggerty Road, and of Meadowbrook Road from 10 Mile Road to 11 Mile Road, in the amount of \$277,529.

SUBMITTING DEPARTMENT: Department of Public Works, Engineering Division

EXPENDITURE REQUIRED	\$ 161,898.00 Meadowbrook Rd Rehab \$ 115,631.00 Nine Mile Rd Rehab \$ 277,529.00 Total
AMOUNT BUDGETED	\$ 162,000.00 Meadowbrook Rd Rehab (FY 2023-24 Budget) \$ 115,770.00 Nine Mile Rd Rehab, (FY 2023-24 Budget) \$ 277,770.00 Total
APPROPRIATION REQUIRED	\$ 0
LINE ITEM NUMBER	202-449.20-975.227 Meadowbrook Rd Rehab 202-449.20-975.229 Nine Mile Rd Rehab

BACKGROUND INFORMATION:

In 2021, the City was awarded federal funds through the Oakland County Federal Aid Committee (FAC) to rehabilitate Nine Mile Rd between Meadowbrook Rd and Haggerty Rd, and Meadowbrook Rd between 10 Mile Road and 11 Mile Road in 2024. The City is expected to receive \$573,379 for Nine Mile Road and \$931,161 for Meadowbrook Road. The federal funding for the project will be administered by the Michigan Department of Transportation Local Agency Program (MDOT LAP).

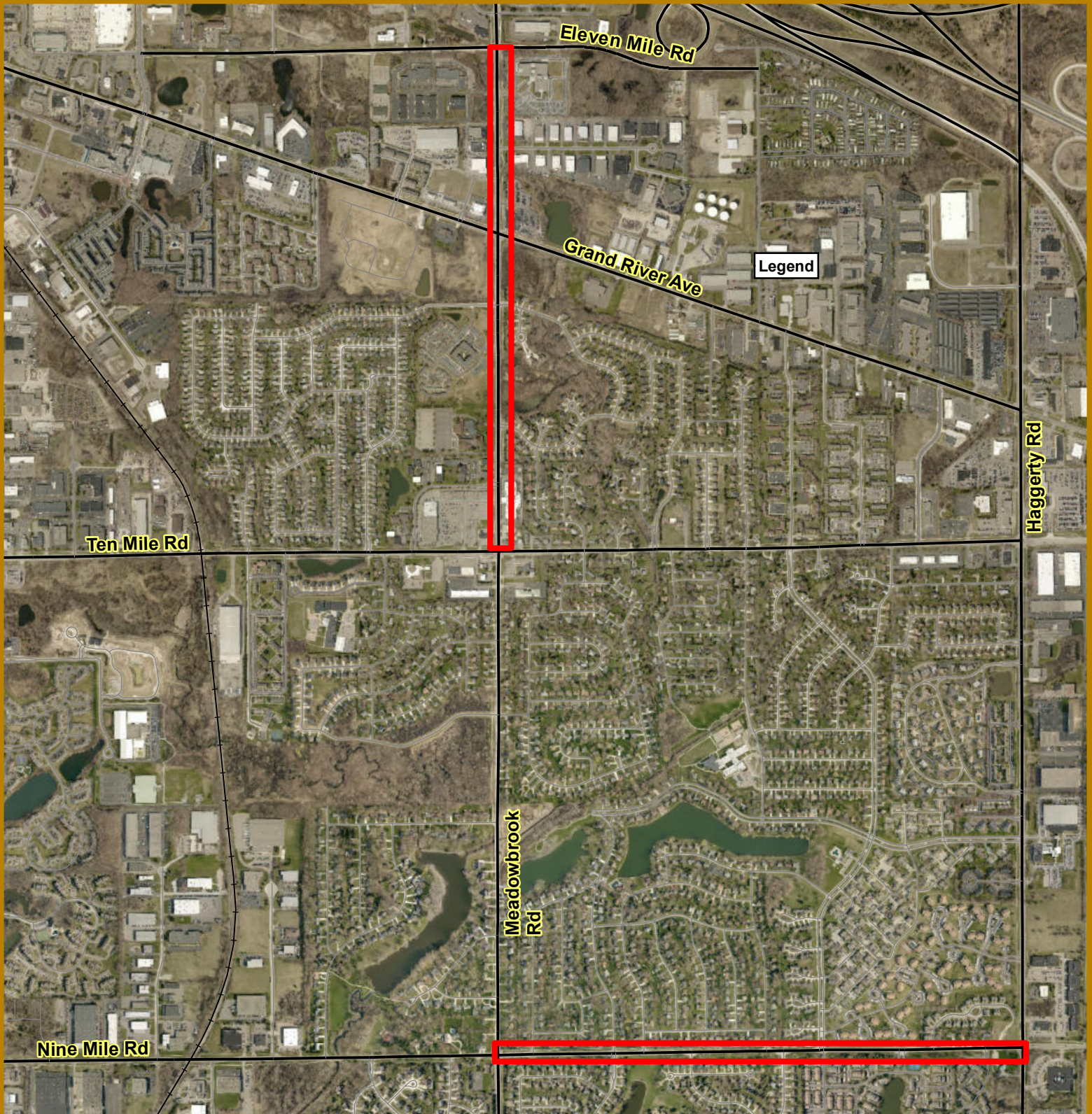
The Nine Mile Rd rehabilitation project will consist of a combination of crushing and shaping and cold-milling and resurfacing of the asphalt pavement. The road will be widened to add a passing lane at Crosswinds Road and between Heatherwoode and Cranbrooke Drives to provide a center left turn lane. The Meadowbrook Road rehabilitation will consist mostly of cold-milling and resurfacing of the asphalt

pavement. On both roads, curb and gutter will be replaced as needed, and localized areas of base repair and subgrade undercutting will be completed.

The attached design engineering services proposal outlines the detailed scope of services. The design fee for Nine Mile Road will be \$115,631 (6.25% of the estimated construction cost of \$1,713,071, plus an additional 0.50% of the estimated construction cost for MDOT administration). The design fee for Meadowbrook Road will be \$161,898 (6.25% of the estimated construction cost of \$2,398,499, plus an additional 0.50% of the estimated construction cost for MDOT administration). OHM Advisor's engineering fees are based on the fixed fee schedule established in the Agreement for Professional Engineering Services for Public Projects. Design of this project would begin following award (after July 1, 2023) with construction expected to occur in 2024.

RECOMMENDED ACTION: Approval to award engineering design services to OHM Advisors for the rehabilitation of Nine Mile Road from Meadowbrook Road to Haggerty Road, and of Meadowbrook Road from 10 Mile Road to 11 Mile Road, in the amount of \$277,529.

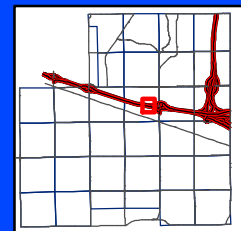
Nine Mile Road and Meadowbrook Road Rehabilitation Location Map



Map Author: Runkel
Date: 5-25-23
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.

 Project Areas



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





April 3, 2023

Mr. Jeffrey Herczeg
Director of Public Works
City of Novi - Department of Public Works
26300 Lee BeGole Drive
Novi, MI 48375

**RE: Scope of Design Services
9 Mile Road + Meadowbrook Road Rehabilitation
MDOT LAP JN 214168 + 214182**

Dear Mr. Herczeg:

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 rehabilitating 9 Mile Road (JN 214168) from Meadowbrook Road to Haggerty Road along with Meadowbrook Road (JN 214182) from 10 Mile Road to 11 Mile Road. The 9 Mile Road HMA rehabilitation will consist of a combination of crushing & shaping and cold milling & resurfacing. The roadway will be widened at the following locations to provide:

- A passing lane on westbound 9 Mile Road at Crosswinds Road.
- A center left turn lane on 9 Mile Road between Heatherwoode and Cranbrooke Drive.

The Meadowbrook Road HMA rehabilitation will consist primarily of cold milling & resurfacing. On both roadways, deteriorated curb & gutter will be replaced, and localized areas of base repair and subgrade undercutting will be completed.

In 2021, the City applied for and received approximately \$1.50 million in Federal funds (STP) to rehabilitate 9 Mile Road and Meadowbrook Road in 2024. It is our understanding that the City has budgeted matching road funds for 2024 construction. Construction of the project is anticipated to cost approximately **\$4.32** million.

The Federal funding for the project must be administered through the Michigan Department of Transportation Local Agency Program (MDOT LAP). The City should be aware that the Federal Aid process is much longer than a City-administered project, and typically requires a minimum of six months from the initial submittal to MDOT to the award of a construction contract. The plans for this project will be developed in accordance with MDOT guidelines such that the project can be administered through MDOT's LAP Unit. Additional project administration effort required for the Federal Aid process (e.g., program applications, NEPA, SHPO, right-of-way certification, crash analysis, mobility analysis, G.I. Meeting, etc.) have been included in this scope. Please note that the normal bidding services provided to the City will not be completed since this project will be going through the Federal Aid process in which the project will be bid through MDOT.

OHM Advisors®

2365 PONTIAC RD, SUITE 201
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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 kick-off meeting with City staff to review project objectives, prepare design criteria, and confirm the delivery schedule.
- Perform a topographic survey of the project area and prepare drawings of the existing conditions.
- Obtain existing utility information from record drawings and depict them on the plans. Identify potential conflicts. If they are unavoidable, coordinate with the utility owner for relocation.
- Perform a site review to confirm the proposed pavement rehabilitation method and to identify any deficiencies in the existing geometrics or drainage features.
- Coordinate with the geotechnical engineer (under separate contract with the City) to develop the proposed pavement typical section.
- Prepare roadway plans including typical cross-sections, horizontal alignments, and vertical profiles.
- Prepare plans, special provisions, and estimates at each milestone: Base, Preliminary (G.I.), and Final.
- Attend review meetings after each milestone submittal with the City, utility companies, and MDOT.
- Prepare the Maintenance of Traffic (MOT) plan. We anticipate the MOT plan will be developed in coordination with City staff and input from project stakeholders.
- Develop pavement marking and signing plans for the project limits in accordance with the MMUTCD.
- Coordinate with RCOC on issues that affect their roadways or traffic signals.
- Complete and submit the Program Application for Local Agency Projects (form 0260) and the Local Agency Environmental Clearance Form (form 5323).
- Collaborate with Commonwealth Heritage Group (under separate contract with the City) to complete a SHPO application and submit it to the State of Michigan.
- Prepare and submit all required permit applications on behalf of the City.
- Prepare the Progress Clause including the start of work, substantial completion (approved-for-traffic), and final contract completion dates.
- Address any questions that arise during the MDOT bidding process.

ASSUMPTIONS

The following summarizes our assumptions associated with this proposal:

- Project Limits:
 - The anticipated POB on 9 Mile Road is the east pavement edge of Meadowbrook Road. The anticipated POE on 9 Mile Road is the west pavement edge of Haggerty Road.
 - The anticipated POB on Meadowbrook Road is the north pavement edge of 10 Mile Road. The anticipated POE on Meadowbrook Road is the south pavement edge of 11 Mile Road.
 - The Meadowbrook Road rehabilitation will be gapped out at Grand River Ave, likely from the south spring point to the north spring point. The resurfacing limits will be confirmed in the field, matching whatever was recently paved by the Grand River Avenue project.
- Pavement Rehabilitation:
 - The 9 Mile Road HMA rehabilitation will consist of crushing & shaping within the open-shoulder sections with cold milling & resurfacing in the curbed sections. Some areas of base repair will be needed in the cold milling areas.
 - The Meadowbrook Road HMA rehabilitation will consist primarily of cold milling & resurfacing. Some areas of base repair will be needed.
 - If there is no crash history attributed to it, the existing cross-slope will be retained on both 9 Mile Road and Meadowbrook Road. If it does not meet the current 2% standard, we will seek a Design Exception.



- Pavement Widening:
 - 9 Mile Road will be widened to provide a passing lane for westbound traffic at Pondview/Crosswinds Road.
 - 9 Mile Road will be widened to provide a center left turn lane between Heatherwoode and Cranbrooke Drive (Peachtree).
 - Although a deceleration taper was suggested for southbound Meadowbrook Road at Hamlet Lane (a.k.a. Tera Lane), it will not be included in this project because that would disrupt the relatively new guardrail terminal.
- This project will not include any new sidewalk on 9 Mile Road or Meadowbrook Road. However, ADA sidewalk ramps and a crosswalk will be provided on the south side of 9 Mile Road at Sunrise Boulevard.
- Right-of-Way & Access Management:
 - On the north side of 9 Mile Road, there is a concrete driveway that is connected to Trillium Drive by a gravel drive. We will pursue a consent-to-close and remove this concrete driveway. Perhaps the City is aware of development plans for this property.
 - On the east side of Meadowbrook Road, just north of 10 Mile Road, there is a parking lot with uncontrolled access. We will pursue a consent-to-close drive to improve access management. A shared HMA commercial driveway will be proposed at the existing gravel driveway between the businesses. A curbed island will be proposed between the roadway and parking.
 - Other than the access management improvements described above, neither right-of-way acquisition nor consents-to-grade are expected for this project.
- Drainage:
 - There are no large culvert crossings under 9 Mile Road.
 - No improvements are proposed to the large culvert for Bishop Creek under Meadowbrook Road (between Hamlet Lane and Vincenti Court). However, the guardrail at this culvert location will be reviewed and upgraded if necessary.
 - On both 9 Mile Road and Meadowbrook Road, open shoulder ditch sections will remain that way. No new enclosed drainage will be proposed, except as needed for the proposed widening described above.
- Water main and sanitary sewer design is not included in this proposal. Other than adjustment of hydrants, manhole covers, and gate well covers, no other municipal utility work is anticipated for this project.
- The City will be responsible for all permit application fees and permit fees.
- Wetlands:
 - There do not appear to be any wetlands along 9 Mile Road.
 - There is evidence of wetlands along Meadowbrook Road, but unless a new sidewalk is added to the project, they should not be impacted. Nevertheless, we will have to delineate the wetlands and meet on-site with EGLE to ensure NEPA clearance.
 - Wetland mitigation is not anticipated on this project.
- The plans will be prepared using MicroStation Connect and OpenRoads. If AutoCAD files are desired by the City for their electronic records, the drawings will be converted and provided at the end of the design phase.
- Design of streetscape improvements, landscaping, and ornamental features is not included in this proposal.
- No traffic signal work is proposed for 9 Mile Road or for Meadowbrook Road.
- Geotechnical services will be required for design and construction of this project but are not included in OHM's scope of work. These services will be provided by the City's geotechnical consultant under a separate contract.
- Historical services will be required but are not included in OHM's scope of work. These services will be provided by Commonwealth Heritage Group under a separate contract.
- Remediation or removal of hazardous contaminated soils or materials is not anticipated on this project.



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 466-4557

PROJECT: 2024-2025 FAC Estimate
 LOCATION: City of Novi
 WORK:

DATE: March 14, 2023
 PROJECT #: 0163-20-0110
 ESTIMATOR: ARP/TEP
 CHECKED BY: TJJ
 CURRENT ENR: TJJ

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
CATEGORY 1 - 9 MILE					
1077051	Audio Video Route Survey	LSUM	1	\$ 5,000.00	\$ 5,000.00
1100001	Mobilization, Max	LSUM	0.4	\$340,000.00	\$ 136,000.00
2030011	Dr Structure, Rem	Ea	2	\$ 500.00	\$ 1,000.00
2040020	Curb and Gutter, Rem	Ft	2165	\$ 10.00	\$ 21,650.00
2040055	Sidewalk, Rem	Syd	95	\$ 12.00	\$ 1,140.00
2047011	Pavt, Rem, Modified	Syd	3473	\$ 10.00	\$ 34,730.00
2047050	Exploratory Excavation	Ea	5	\$ 65.00	\$ 325.00
2050010	Embankment, CIP	Cyd	496	\$ 45.00	\$ 22,320.00
2050016	Excavation, Earth	Cyd	2418	\$ 30.00	\$ 72,540.00
2050031	Non Haz Contaminated Material Handling and Disposal, LM	Cyd	100	\$ 75.00	\$ 7,500.00
2057021	Subgrade Undercutting Type II, 21AA	Cyd	200	\$ 75.00	\$ 15,000.00
2057021	Subgrade Undercutting, Type II, 1 by 3	Cyd	200	\$ 75.00	\$ 15,000.00
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	25	\$ 120.00	\$ 3,000.00
2080036	Erosion Control, Silt Fence	Ft	2500	\$ 5.00	\$ 12,500.00
2090001	Project Cleanup	LSUM	0.4	\$ 8,500.00	\$ 3,400.00
3020050	Aggregate Base, Conditioning	Syd	7406	\$ 2.50	\$ 18,515.00
3027011	Aggregate Base, 8 inch, Modified	Syd	5185	\$ 24.00	\$ 124,440.00
3027031	Aggregate Base, Modified	Ton	500	\$ 45.00	\$ 22,500.00
3050002	HMA Base Crushing and Shaping	Syd	11014	\$ 5.00	\$ 55,070.00
3050010	Material, Surplus and Unsuitable, Rem, LM	Cyd	500	\$ 15.00	\$ 7,500.00
3050015	Salv Crushed Material, LM	Cyd	500	\$ 15.00	\$ 7,500.00
3060020	Maintenance Gravel	Ton	1500	\$ 30.00	\$ 45,000.00
3077011	Shld, CI II, 6 inch, Modified	Syd	3937	\$ 15.00	\$ 59,055.00
4020033	Sewer, CI A, 12 inch, Tr Det B	Ft	20	\$ 80.00	\$ 1,600.00
4030010	Dr Structure Cover, Type B	Ea	2	\$ 625.00	\$ 1,250.00
4030050	Dr Structure Cover, Type K	Ea	15	\$ 750.00	\$ 11,250.00
4030065	Dr Structure Cover, Type Q	Ea	2	\$ 625.00	\$ 1,250.00
4030200	Dr Structure, 24 inch dia	Ea	2	\$ 1,200.00	\$ 2,400.00
4030280	Dr Structure, Adj, Add Depth	Ft	10	\$ 250.00	\$ 2,500.00
4030306	Dr Structure, Tap, 6 inch	Ea	5	\$ 250.00	\$ 1,250.00
4037050	San Structure Cover, Adj	Ea	1	\$ 1,000.00	\$ 1,000.00
4037050	Stm Structure Cover, Adj	Ea	10	\$ 750.00	\$ 7,500.00
4037050	Wtr Structure Cover, Adj	Ea	1	\$ 1,000.00	\$ 1,000.00
4040083	Underdrain, Subgrade, Open-Graded, 6 inch	Ft	2000	\$ 12.50	\$ 25,000.00
5010001	Pavt, Cleaning	LSUM	0.4	\$ 8,500.00	\$ 3,400.00
5010002	Cold Milling HMA Surface	Syd	10218	\$ 3.00	\$ 30,654.00
5010008	Pavt for Butt Joints, Rem	Syd	500	\$ 50.00	\$ 25,000.00
5010020	Pavt Joint and Crack Repr, Det 7	Ft	500	\$ 5.00	\$ 2,500.00
5010021	Pavt Joint and Crack Repr, Det 8	Ft	250	\$ 10.00	\$ 2,500.00
5010025	Hand Patching	Ton	50	\$ 135.00	\$ 6,750.00



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ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
5010061	HMA Approach	Ton	1271	\$ 165.00	\$ 209,715.00
5012001	HMA, 2EML	Ton	954	\$ 120.00	\$ 114,480.00
5012013	HMA, 3EML	Ton	1856	\$ 120.00	\$ 222,720.00
5012037	HMA, 5EML	Ton	2	\$ 120.00	\$ 240.00
8010005	Driveway, Nonreinf Conc, 6 inch	Syd	108	\$ 75.00	\$ 8,100.00
8020038	Curb and Gutter, Conc, Det F4	Ft	2165	\$ 30.00	\$ 64,950.00
8020057	Shld Gutter, Conc, Det 3	Ea	10	\$ 1,000.00	\$ 10,000.00
8030030	Curb Ramp Opening, Conc	Ft	170	\$ 30.00	\$ 5,100.00
8032002	Curb Ramp, Conc, 6 inch	Sft	2500	\$ 9.00	\$ 22,500.00
8037001	Detectable Warning Surface, Modified	Ft	170	\$ 40.00	\$ 6,800.00
8077050	Post, Mailbox, Remove and Reset	Ea	20	\$ 150.00	\$ 3,000.00
8100371	Post, Steel, 3 lb	Ft	700	\$ 7.00	\$ 4,900.00
8100403	Sign, Type III, Rem	Ea	50	\$ 15.00	\$ 750.00
8100404	Sign, Type IIIA	Sft	225	\$ 18.00	\$ 4,050.00
8100405	Sign, Type IIIB	Sft	225	\$ 18.00	\$ 4,050.00
8110091	Pavt Mrkg, Polyurea, 4 inch, White	Ft	10000	\$ 1.00	\$ 10,000.00
8110092	Pavt Mrkg, Polyurea, 4 inch, Yellow	Ft	15000	\$ 1.00	\$ 15,000.00
8110093	Pavt Mrkg, Polyurea, 6 inch, Crosswalk	Ft	250	\$ 5.00	\$ 1,250.00
8110113	Pavt Mrkg, Polyurea, 18 inch, Stop Bar	Ft	250	\$ 10.00	\$ 2,500.00
8110410	Pavt Mrkg, Polyurea, Only	Ea	10	\$ 250.00	\$ 2,500.00
8110450	Recessing Pavt Mrkg, Longit	Ft	25000	\$ 0.50	\$ 12,500.00
8110451	Recessing Pavt Mrkg, Transv	Sft	500	\$ 2.50	\$ 1,250.00
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	100	\$ 100.00	\$ 10,000.00
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Oper	Ea	100	\$ 5.00	\$ 500.00
8120026	Pedestrian Type II Barricade, Temp	Ea	25	\$ 250.00	\$ 6,250.00
8120035	Channelizing Device, 42 inch, Fluorescent, Furn	Ea	500	\$ 25.00	\$ 12,500.00
8120036	Channelizing Device, 42 inch, Fluorescent, Oper	Ea	500	\$ 1.00	\$ 500.00
8120140	Lighted Arrow, Type C, Furn	Ea	2	\$ 500.00	\$ 1,000.00
8120141	Lighted Arrow, Type C, Oper	Ea	2	\$ 1.00	\$ 2.00
8120170	Minor Traf Devices	LSUM	0.4	\$127,000.00	\$ 50,800.00
8120236	Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Tel	Ft	5000	\$ 0.50	\$ 2,500.00
8120350	Sign, Type B, Temp, Prismatic, Furn	Sft	750	\$ 7.50	\$ 5,625.00
8120351	Sign, Type B, Temp, Prismatic, Oper	Sft	750	\$ 1.00	\$ 750.00
8120352	Sign, Type B, Temp, Prismatic, Spec, Furn	Sft	250	\$ 15.00	\$ 3,750.00
8120353	Sign, Type B, Temp, Prismatic, Spec, Oper	Sft	250	\$ 1.00	\$ 250.00
8120370	Traf Regulator Control	LSUM	0.4	\$ 64,000.00	\$ 25,600.00
8167011	Turf Establishment, Performance	Syd	7500	\$ 5.00	\$ 37,500.00
8210001	Monument Box	Ea	1	\$ 700.00	\$ 700.00
8210005	Monument Box Adj	Ea	1	\$ 600.00	\$ 600.00
8210010	Monument Preservation	Ea	1	\$ 650.00	\$ 650.00
8210020	Protect Corners	Ea	1	\$ 500.00	\$ 500.00



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 CHECKED BY: TJJ
 CURRENT ENR: TJJ

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
8230422	Water Shutoff, Adj, Case 2	Ea	5	\$ 250.00	\$ 1,250.00
8237001	Sprinkler Line	Ft	1000	\$ 5.00	\$ 5,000.00
8237050	Irrigation Control Box, Relocate	Ea	1	\$ 500.00	\$ 500.00
8237050	Irrigation Control Box, Replace	Ea	1	\$ 500.00	\$ 500.00
8237050	Sprinkler Head, Relocate	Ea	20	\$ 50.00	\$ 1,000.00
8237050	Sprinkler Head, Replace	Ea	20	\$ 50.00	\$ 1,000.00
CATEGORY 2 - MEADOWBROOK					
1077051	Audio Video Route Survey	LSUM	1	\$ 5,000.00	\$ 5,000.00
1100001	Mobilization, Max	LSUM	0.6	\$340,000.00	\$ 204,000.00
2040020	Curb and Gutter, Rem	Ft	1250	\$ 10.00	\$ 12,500.00
2040055	Sidewalk, Rem	Syd	187	\$ 12.00	\$ 2,244.00
2047050	Exploratory Excavation	Ea	10	\$ 65.00	\$ 650.00
2050010	Embankment, CIP	Cyd	112	\$ 45.00	\$ 5,040.00
2050016	Excavation, Earth	Cyd	448	\$ 30.00	\$ 13,440.00
2050031	Non Haz Contaminated Material Handling and Disposal, LM	Cyd	100	\$ 75.00	\$ 7,500.00
2057021	Subgrade Undercutting Type II, 21AA	Cyd	200	\$ 75.00	\$ 15,000.00
2057021	Subgrade Undercutting, Type II, 1 by 3	Cyd	200	\$ 75.00	\$ 15,000.00
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	25	\$ 120.00	\$ 3,000.00
2080036	Erosion Control, Silt Fence	Ft	2500	\$ 5.00	\$ 12,500.00
2090001	Project Cleanup	LSUM	0.6	\$ 8,500.00	\$ 5,100.00
3027011	Aggregate Base, 4 inch, Modified	Syd	318	\$ 15.00	\$ 4,770.00
3027011	Aggregate Base, 8 inch, Modified	Syd	7181	\$ 24.00	\$ 172,344.00
3060020	Maintenance Gravel	Ton	1500	\$ 30.00	\$ 45,000.00
3077011	Shld, CI II, 6 inch, Modified	Syd	2354	\$ 15.00	\$ 35,310.00
4030010	Dr Structure Cover, Type B	Ea	5	\$ 625.00	\$ 3,125.00
4030025	Dr Structure Cover, Type D	Ea	1	\$ 750.00	\$ 750.00
4030040	Dr Structure Cover, Type G	Ea	2	\$ 750.00	\$ 1,500.00
4030050	Dr Structure Cover, Type K	Ea	10	\$ 750.00	\$ 7,500.00
4030065	Dr Structure Cover, Type Q	Ea	2	\$ 625.00	\$ 1,250.00
4030280	Dr Structure, Adj, Add Depth	Ft	10	\$ 250.00	\$ 2,500.00
4030306	Dr Structure, Tap, 6 inch	Ea	5	\$ 250.00	\$ 1,250.00
4037050	San Structure Cover, Adj	Ea	5	\$ 1,000.00	\$ 5,000.00
4037050	Stm Structure Cover, Adj	Ea	10	\$ 750.00	\$ 7,500.00
4037050	Wtr Structure Cover, Adj	Ea	1	\$ 1,000.00	\$ 1,000.00
4040083	Underdrain, Subgrade, Open-Graded, 6 inch	Ft	2000	\$ 12.50	\$ 25,000.00
5010001	Pavt, Cleaning	LSUM	0.6	\$ 8,500.00	\$ 5,100.00
5010002	Cold Milling HMA Surface	Syd	30178	\$ 3.00	\$ 90,534.00
5010008	Pavt for Butt Joints, Rem	Syd	500	\$ 50.00	\$ 25,000.00
5010020	Pavt Joint and Crack Repr, Det 7	Ft	500	\$ 5.00	\$ 2,500.00
5010021	Pavt Joint and Crack Repr, Det 8	Ft	250	\$ 10.00	\$ 2,500.00



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 ESTIMATOR: ARP/TEP
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ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
5010025	Hand Patching	Ton	50	\$ 135.00	\$ 6,750.00
5010061	HMA Approach	Ton	3700	\$ 165.00	\$ 610,500.00
5012001	HMA, 2EML	Ton	1580	\$ 120.00	\$ 189,600.00
5012013	HMA, 3EML	Ton	3883	\$ 120.00	\$ 465,960.00
8020038	Curb and Gutter, Conc, Det F4	Ft	1350	\$ 30.00	\$ 40,500.00
8020050	Driveway Opening, Conc, Det M	Ft	60	\$ 35.00	\$ 2,100.00
8020057	Shld Gutter, Conc, Det 3	Ea	25	\$ 1,000.00	\$ 25,000.00
8030030	Curb Ramp Opening, Conc	Ft	266	\$ 30.00	\$ 7,980.00
8030048	Sidewalk, Conc, 8 inch	Sft	650	\$ 12.00	\$ 7,800.00
8032002	Curb Ramp, Conc, 6 inch	Sft	2500	\$ 9.00	\$ 22,500.00
8037001	Detectable Warning Surface, Modified	Ft	190	\$ 40.00	\$ 7,600.00
8100371	Post, Steel, 3 lb	Ft	700	\$ 7.00	\$ 4,900.00
8100403	Sign, Type III, Rem	Ea	50	\$ 15.00	\$ 750.00
8100404	Sign, Type IIIA	Sft	225	\$ 18.00	\$ 4,050.00
8100405	Sign, Type IIIB	Sft	225	\$ 18.00	\$ 4,050.00
8110091	Pavt Mrkg, Polyurea, 4 inch, White	Ft	10000	\$ 1.00	\$ 10,000.00
8110092	Pavt Mrkg, Polyurea, 4 inch, Yellow	Ft	15000	\$ 1.00	\$ 15,000.00
8110093	Pavt Mrkg, Polyurea, 6 inch, Crosswalk	Ft	250	\$ 5.00	\$ 1,250.00
8110113	Pavt Mrkg, Polyurea, 18 inch, Stop Bar	Ft	250	\$ 10.00	\$ 2,500.00
8110410	Pavt Mrkg, Polyurea, Only	Ea	25	\$ 250.00	\$ 6,250.00
8110450	Recessing Pavt Mrkg, Longit	Ft	25000	\$ 0.50	\$ 12,500.00
8110451	Recessing Pavt Mrkg, Transv	Sft	1250	\$ 2.50	\$ 3,125.00
8120012	Barricade, Type III, High Intensity, Double Sided, Lighted, Furn	Ea	100	\$ 100.00	\$ 10,000.00
8120013	Barricade, Type III, High Intensity, Double Sided, Lighted, Ope	Ea	100	\$ 5.00	\$ 500.00
8120026	Pedestrian Type II Barricade, Temp	Ea	25	\$ 250.00	\$ 6,250.00
8120035	Channelizing Device, 42 inch, Fluorescent, Furn	Ea	500	\$ 25.00	\$ 12,500.00
8120036	Channelizing Device, 42 inch, Fluorescent, Oper	Ea	500	\$ 1.00	\$ 500.00
8120140	Lighted Arrow, Type C, Furn	Ea	2	\$ 500.00	\$ 1,000.00
8120141	Lighted Arrow, Type C, Oper	Ea	2	\$ 1.00	\$ 2.00
8120170	Minor Traf Devices	LSUM	0.6	\$127,000.00	\$ 76,200.00
8120236	Pavt Mrkg, Wet Reflective, Type NR, Paint, 4 inch, Yellow, Tel	Ft	5000	\$ 0.50	\$ 2,500.00
8120350	Sign, Type B, Temp, Prismatic, Furn	Sft	750	\$ 7.50	\$ 5,625.00
8120351	Sign, Type B, Temp, Prismatic, Oper	Sft	750	\$ 1.00	\$ 750.00
8120352	Sign, Type B, Temp, Prismatic, Spec, Furn	Sft	250	\$ 15.00	\$ 3,750.00
8120353	Sign, Type B, Temp, Prismatic, Spec, Oper	Sft	250	\$ 1.00	\$ 250.00
8120370	Traf Regulator Control	LSUM	0.6	\$ 64,000.00	\$ 38,400.00
8167011	Turf Establishment, Performance	Syd	7500	\$ 5.00	\$ 37,500.00
8210001	Monument Box	Ea	1	\$ 700.00	\$ 700.00
8210005	Monument Box Adj	Ea	1	\$ 600.00	\$ 600.00
8210010	Monument Preservation	Ea	1	\$ 650.00	\$ 650.00
8210020	Protect Corners	Ea	1	\$ 500.00	\$ 500.00



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 466-4557

PROJECT: 2024-2025 FAC Estimate
LOCATION: City of Novi
WORK:

DATE: March 14, 2023
PROJECT #: 0163-20-0110
ESTIMATOR: ARP/TEP
CHECKED BY: TJJ
CURRENT ENR: TJJ

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
8230422	Water Shutoff, Adj, Case 2	Ea	5	\$ 250.00	\$ 1,250.00
8237001	Sprinkler Line	Ft	1000	\$ 5.00	\$ 5,000.00
8237050	Irrigation Control Box, Relocate	Ea	1	\$ 500.00	\$ 500.00
8237050	Irrigation Control Box, Replace	Ea	1	\$ 500.00	\$ 500.00
8237050	Sprinkler Head, Relocate	Ea	20	\$ 50.00	\$ 1,000.00
8237050	Sprinkler Head, Replace	Ea	20	\$ 50.00	\$ 1,000.00
SUBTOTAL FOR CATEGORY 1 - 9 MILE					\$ 1,713,071.00
SUBTOTAL FOR CATEGORY 2 - MEADOWBROOK					\$ 2,398,499.00
CONTINGENCY (5%)					\$ 205,578.50
TOTAL OPINION OF PROBABLE CONSTRUCTION COST =					\$ 4,317,148.50