



# CITY of NOVI CITY COUNCIL

**Agenda Item E  
February 5, 2018**

**SUBJECT:** Approval to award an amendment to the engineering services agreement with OHM Advisors for construction engineering services for the Heslip Drive Detention Basin Cleanout and Bassett Drain (McSweeney Pond) Cleanout and Culvert Replacement projects in the amount of \$50,769.19.

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

**CITY MANAGER APPROVAL:**

<b>EXPENDITURE REQUIRED</b>	<b>\$ 26,401.28- Heslip Drive Detention Basin Cleanout</b> <b>\$ 24,367.91-Bassett Drain Cleanout &amp; Culvert Replacement</b> <b>\$ 50,769.19</b>
<b>AMOUNT BUDGETED</b>	<b>\$ 233,579.00 - Heslip Drive Detention Basin Cleanout</b> <b>\$ 253,550.00 - Bassett Drain Cleanout &amp; Culvert Replacement</b>
<b>LINE ITEM NUMBER</b>	<b>210-211.00-865.128 Heslip Drive Detention Basin Cleanout</b> <b>210-211.00-865.030 Bassett Drain Cleanout &amp; Culvert Replacement</b>

**BACKGROUND INFORMATION:**

Per City Council Meeting Minutes dated December 1976, the City agreed to permit the developer to maintain the Heslip Drive detention basin without providing a performance guarantee or lien on the industrial subdivision property, but obligated the developer to maintain the basin. Although documentation indicates the developer should have been responsible for maintaining the basin beginning in 1973, there are no clear records from the City supporting that any maintenance was ever undertaken on the detention basin. Given the unclear documentation of the detention basin maintenance, the City Attorney has determined the responsibility for the detention basin maintenance lies with the City.

The Bassett Drain connects to Bishop Creek on the north side of Eleven Mile Road, west of Meadowbrook Road. Bassett Drain requires sediment accumulation removal to prevent damage to Novi's regional detention basins downstream by intercepting the sediment that is currently bypassing the Bassett Drain and causing excessive loading on the Middle Rouge River. The homeowner of the property where Bassett Drain is located has also requested this cleanout occur in order to prevent excessive flooding on his property. Bassett Drain currently has a corrugated metal pipe (CMP) culvert which is in disrepair and the pond has reached sediment capacity for on the property. As part of the change order, the City intends to remove and replace the CMP culvert and cleanout the accumulated sediment from the upstream portion of the aforementioned culvert. Additionally, rip-rap will be installed on the south bank of the pond.

The construction phase engineering fees are determined using the 2017-2022 Engineering Fee Table located in the Agreement for Professional Engineering Services for Public Projects which began on December 18, 2017.

The construction phase engineering fees for this project include a contract administration fee of \$26,269.19 (7.0% of the \$375,274.10 construction bid) and an inspection fee of \$24,500.00 (\$700 per crew day, multiplied by the 35 days provided in the contractor's bid) for a total fee of \$50,769.19. These totals are for both basins.

The construction contract award is a change order for consideration elsewhere on this agenda. It is anticipated this project will be substantially complete by the late spring 2018 with final completion and restoration soon after.

**RECOMMENDED ACTION:** Approval to award an amendment to the engineering services agreement with OHM Advisors for construction engineering services for the Heslip Drive Detention Basin Cleanout and Bassett Drain (McSweeney Pond) Cleanout and Culvert Replacement projects in the amount of \$50,769.19.

# Bassett/McSweeney Culvert Replacement

Bassett Drain

11 Mile Road

# Heslip Detention Basin Cleanout

Heslip Detention Basin

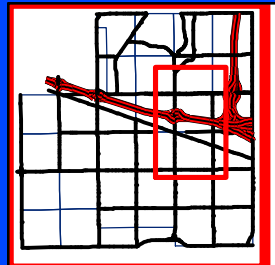
9 Mile Road

Map Author: J. Akers  
Date: 1/29/2018

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.



**City of Novi**

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

Feet  
0 15 30 60 90

1 inch = 94 feet



**PRELIMINARY OPINION OF PROBABLE PROJECT COSTS**

<b>Project ID#</b>	<b>CIP Budget Category</b>	<b>Opinion as of</b>	<b>Total Project Cost</b>
NEW	Storm Sewer & Drainage	January 2018	<b>\$233,579</b>

**Heslip Drive Detention Basin Cleanout**

Cleanout accumulated sediment and vegetation from the basin, replace end sections/rip-rap, and clean inlet & outlet sewers



Design Engineering	\$ 9,200
Right-of-Way Acquisition	\$ -
Geotechnical Design	\$ -
Other	\$ -
<b>TOTAL ENGINEERING</b>	<b>\$ 9,200</b>
* Contingency	\$ 460
<i>* Contingency Notes:</i>	
5%	
<b>TOTAL ENGINEERING (including contingency)</b>	<b>\$ 9,660</b>

Construction	\$ 177,161
Construction Engineering	\$ 12,401
Crew Days	\$ 14,000
Material Testing	\$ -
Other	\$ -
<b>TOTAL CONSTRUCTION</b>	<b>\$ 203,562</b>
* Contingency	\$ 20,357
<i>* Contingency Notes:</i>	
10%	
<b>TOTAL CONSTRUCTION (including contingency)</b>	<b>\$ 223,919</b>

<b>BUDGET DETERMINATION BASED ON YEAR AWARDED</b>			
2017-18	\$233,580	2022-23	\$270,783
2018-19	\$240,587	2023-24	\$278,907
2019-20	\$247,805	2024-25	\$287,274
2020-21	\$255,239	2025-26	\$295,892
2021-22	\$262,896	2026-27	\$304,769

**Outside Funding?**



OHM Advisors  
 1827 N. Squirrel Road, Auburn Hills Michigan, 48326

Telephone: (248) 751-3100 FAX: (248) 364-3001

CLIENT: City of Novi  
 PROJECT: Heslip Drive Detention Basin Cleanout  
 DESCRIPTION: Cleanout accumulated sediment and vegetation from the basin, replace end sections/rip-rap, and clean inlet & outlet sewers. Located on the east side of Heslip Drive, north of 9 Mile Road

DATE: Jan 22, 2018  
 PROJECT NO. 0163-17-0140  
 CONTRACTOR: Anglin Civil

Item	Description	Unit	Total Quantity	Unit Price	Total Cost
1	Mobilization, Max. 5%	LS	1	\$7,500.00	\$7,500.00
2	Audio Video Recording	LS	1	\$5,575.00	\$5,575.00
3	Soil Erosion and Sedimentation Control Measures	LS	1	\$3,902.50	\$3,902.50
4	Orange Construction Fencing	FT	500	\$5.58	\$2,790.00
5	Clearing & Grubbing	LS	1	\$13,380.00	\$13,380.00
6	Pond Cleanout	CYD	3,800	\$20.07	\$76,266.00
7	Ditch Cleanout	FT	90	\$55.75	\$5,017.50
8	Sewer, Rem, Less than 24 inch	FT	20	\$55.75	\$1,115.00
9	Sewer, C76 Cl IV, 18 inch, Tr Det A	FT	20	\$111.50	\$2,230.00
10	Culv End Section, Conc, 12 inch to 24 inch	EA	4	\$1,672.50	\$6,690.00
11	Culv End Section, Conc, 54 inch	EA	1	\$9,477.50	\$9,477.50
12	Rip Rap, Plain	SYD	150	\$33.45	\$5,017.50
13	Clean/Video Sewer, 12 inch to 24 inch	FT	420	\$8.92	\$3,746.40
14	Clean/Video Sewer, 30 inch to 60 inch	FT	490	\$13.38	\$6,556.20
15	Temporary Access Road	LS	1	\$2,787.50	\$2,787.50
16	Turf Restoration	SYD	2,500	\$5.58	\$13,950.00
17	Pond Bank Restoration	SYD	2,000	\$5.58	\$11,160.00
18	Crew Days	DAY	20	\$700.00	\$14,000.00

Subtotal \$191,161.10  
**Total Bid Amount \$191,161.10**



January 4, 2018

Mr. George Melistas  
Engineering Senior Manager and Traffic Engineer  
City of Novi - Department of Public Services  
26300 Lee BeGole Drive  
Novi, MI 48375

RE: Heslip Drive Detention Basin Cleanout  
Proposal for Professional Services

Dear Mr. Melistas:

Per your request, the following outlines our proposed scope of services and fee to perform a design and cost estimate for cleanout of the regional detention pond on the east side of Heslip Drive, north of Nine Mile Road. This summary includes our project understanding, proposed scope of work, assumptions, schedule, and fee.

### PROJECT UNDERSTANDING

We met with City representatives at the City Department of Public Services on December 21, 2017 to discuss this project. We understand that the City desires to cleanout accumulated sediment and vegetation from the basin. As part of the cleanout, the City desires the pond to be “over-excavated” to create a wet basin. The end sections of the existing inlet and outlet sewers will be replaced, including new riprap as part of the work. Additionally, the City would like the existing inlet sewer from Heslip Drive and the outlet sewer along and under the railroad line cleaned and videoed as part of the project. We further understand that the City has jurisdiction over this pond and associated inlet/outlet sewers.

### SCOPE OF SERVICES

The following outlines our work plan to accomplish the scope of services for this project related to culvert replacement, and pond cleanout and modifications as noted above:

- Evaluate available background information and as-built documents that may be helpful in determining basin cleanout volumes.
- Provide an Opinion of Construction Cost Estimate for the proposed basin cleanout, end section/riprap, and sewer cleaning work.
- Utilize existing plans and background information to prepare a plan sheet with necessary details and notes as to the specifics of the basin work.
- Prepare contract documents using standard City contract front-end documents, bidding forms, contract forms, technical/general specifications, method of payment, and supplemental specifications.
- Provide a pdf of the final construction documents and bid sheet to a City selected Contractor for pricing.

### OHM Advisors<sup>®</sup>

1827 NORTH SQUIRREL ROAD  
AUBURN HILLS, MICHIGAN 48326

T 248.751.3100  
F 248.364.3001

OHM-Advisors.com



## ASSUMPTIONS

The following summarizes our assumptions associated with this proposal:

- Survey work is not anticipated to be required. We assume necessary existing and previously proposed basin elevations are available on existing plans and GIS data. We have assumed that 3 to 4 feet of material will be removed from the basin bottom to achieve the desired volume. The final volume of material associated with the excavation will require field verification.
- No geotechnical information is available or to be obtained for the project. The existing soil conditions will need to be evaluated in the field to determine the feasibility of “over-excavating” to create a wet basin.
- We do not anticipate modelling of the pond, sewer, or culvert, and this work is not included in our proposal.
- We assume no utility pole relocations are necessary as part of our design scope.
- Permit applications are not anticipated to be required for this work.
- We do not anticipate remediation or removal of contaminated or hazardous soils or materials. The selected contractor may be required to provide sampling for landfill acceptance purposes at their own cost.
- A full project manual contract book is not anticipated for this project. We assume that we would provide necessary plan sheets and specifications/special provisions to a City selected contractor for pricing and installation.

## SCHEDULE

The following outlines our anticipated schedule milestones of main tasks related to this work effort assuming authorization to proceed by January 9, 2018:

- Construction Plan Sheet, Special Provisions, and Construction Cost Opinion Final Deliverable – January 19, 2018
- Construction to begin in February and final restoration completed by May.

## FEE

Based on the above outlined scope of services and assumptions, our proposed lump sum fee to perform this work is \$9,200. Our fee derivation is based on the following breakdown:

- 15 hours of project management, lead engineer, and QA/QC related time at the standard blanket contract agreement rate of \$115/Hr.
- 65 hours of staff engineer related time (for all individual engineering staff assigned to the project) at the standard blanket contract agreement rate of \$115/Hr.



We appreciate the opportunity to provide professional services to the City of Novi on this project. If you have any questions related to our proposal, please do not hesitate to contact us.

Sincerely,  
**OHM Advisors**

A handwritten signature in blue ink, reading "Timothy J. Juidici", written over a horizontal line.

Timothy J. Juidici  
Client Representative

cc: Jim Stevens, OHM  
File



**PRELIMINARY OPINION OF PROBABLE PROJECT COSTS**

<b>Project ID#</b>	<b>CIP Budget Category</b>	<b>Opinion as of</b>	<b>Total Project Cost</b>
NEW	Storm Sewer & Drainage	January 2018	<b>\$253,550</b>

**Bassett/McSweeney Culvert Replacement**

Replace existing culvert, cleanout pond, install rip rap along south pond bank. Near Meadowbrook on 11 Mile



Design Engineering	\$ 8,400
Right-of-Way Acquisition	\$ -
Geotechnical Design	\$ -
Other	\$ -
<b>TOTAL ENGINEERING</b>	<b>\$ 8,400</b>
* Contingency	\$ 420
<i>* Contingency Notes:</i>	
5%	
<b>TOTAL ENGINEERING (including contingency)</b>	<b>\$ 8,820</b>

Construction	\$ 198,113
Construction Engineering	\$ 13,868
Crew Days	\$ 10,500
Material Testing	\$ -
Other	\$ -
<b>TOTAL CONSTRUCTION</b>	<b>\$ 222,481</b>
* Contingency	\$ 22,249
<i>* Contingency Notes:</i>	
No Contingency - Quote from Contractor	
<b>TOTAL CONSTRUCTION (including contingency)</b>	<b>\$ 244,730</b>

<b>BUDGET DETERMINATION BASED ON YEAR AWARDED</b>			
2017-18	\$253,550	2022-23	\$293,934
2018-19	\$261,157	2023-24	\$302,752
2019-20	\$268,991	2024-25	\$311,835
2020-21	\$277,061	2025-26	\$321,190
2021-22	\$285,373	2026-27	\$330,825

**Outside Funding?**



ORCHARD, HILTZ & McCLIMENT, INC.  
 34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 522-6427

CLIENT: City of Novi  
 PROJECT: Basset/McSweeney Culvert Replacement  
 PROJECT DESCRIPTION: Replace existing culvert, cleanout pond, install rip rap  
along south pond bank. Located on the north side of 11 Mile Road, west  
of Meadowbrook

DATE: Jan 22, 2018  
 PROJECT NO. 0163-17-0090  
 CONTRACTOR: Anglin Civil

Item	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization, Max. 10%	LS	1	\$18,000.00	\$18,000.00
2	Audio Video Recording	LS	1	\$2,875.00	\$2,875.00
3	Erosion Control, Silt Fence	FT	235	\$5.75	\$1,351.25
4	Erosion Control, Check Dam, Stone	FT	40	\$115.00	\$4,600.00
5	Pavt, Rem	SYD	330	\$19.55	\$6,451.50
6	Pond Cleanout	CYD	850	\$88.55	\$75,267.50
7	Sewer, Rem, Less than 24 inch	FT	15	\$57.50	\$862.50
8	Sewer, Rem, 24 inch to 48 inch	FT	55	\$57.50	\$3,162.50
9	Culv, Reinf Conc Ellip, CI IV, 29 inch x 45 inch	FT	60	\$500.25	\$30,015.00
10	Rip Rap, Plain	SYD	350	\$34.50	\$12,075.00
11	Aggregate Base, 21AA, 8 inch	SYD	385	\$24.15	\$9,297.75
12	HMA, 13A, Driveway, 3 inch	SYD	330	\$46.00	\$15,180.00
13	Maintenance Gravel	TON	15	\$115.00	\$1,725.00
14	Turf Establishment	LS	1	\$17,250.00	\$17,250.00
15	Crew Days	DAY	15	\$700.00	\$10,500.00

Subtotal \$208,613.00  
**Total Bid Amount \$208,613.00**



August 14, 2017

Mr. George Melistas  
Engineering Senior Manager and Traffic Engineer  
City of Novi - Department of Public Services  
26300 Lee BeGole Drive  
Novi, MI 48375

RE: Bassett Drain Culvert Replacement  
Proposal for Professional Services

Dear Mr. Melistas:

Per your request, the following outlines our proposed scope of services and fee to perform a design and cost estimate for culvert replacement and pond improvements along the Bassett Drain portion of Bishop Creek on the north side of Eleven Mile Road, west of Meadowbrook Road. This summary includes our project understanding, proposed scope of work, assumptions, schedule, and fee.

## PROJECT UNDERSTANDING

We met with the City on site on July 11, 2017 and at the City Department of Public Services on July 20, 2017 to discuss this project. We understand that the City desires to remove and replace an existing CMP culvert along Bishop Creek at the Bassett Drain crossing under the driveway of the McSweeney Property, and cleanout accumulated sediment from the upstream portion of the aforementioned culvert. Additionally, the south bank of the pond will be assessed in regard to erosion to determine if rip-rap armoring along this segment of bank is necessary. We further understand that the City has jurisdiction over this pond and culvert as they relate to the Bassett Drain.

## SCOPE OF SERVICES

The following outlines our work plan to accomplish the scope of services for this project related to culvert replacement, and pond cleanout and modifications as noted above:

- Evaluate available background information and as-built documents that may be helpful in determining appropriate size and elevation of new replacement culvert.
- Provide an Opinion of Construction Cost Estimate for the proposed culvert replacement, pond cleanout, and pond modification work.
- Utilize existing plans to prepare a plan sheet with necessary details and notes as to the specifics of the culvert replacement, and pond cleanout and modification work. Also prepare special provisions necessary for rip-rap and restoration.
- Provide plan sheet and special provisions to the City for final comment.
- Provide a pdf of the final construction documents and bid sheet to a City selected Contractor for pricing.



## ASSUMPTIONS

The following summarizes our assumptions associated with this proposal:

- Survey work is not anticipated to be required. We assume necessary existing and previously proposed culvert and pond elevations are available on existing plans from the 1996 project. We have assumed a top of sediment elevation at an average of 875.33. The final volume of sediment associated with the dredging will require field verification.
- The existing weir at the outlet of the pond is anticipated to remain in place after project completion.
- We do not anticipate modelling of the pond, drain, or culvert, and this work is not included in our proposal.
- We assume no utility pole relocations are necessary as part of our design scope.
- Permit applications are not anticipated to be required for this work.
- We do not anticipate remediation or removal of contaminated or hazardous soils or materials. The selected contractor may be required to provide sampling for landfill acceptance purposes at their own cost.
- A full project manual contract book is not anticipated for this project. We assume that we would provide necessary plan sheets and specifications/special provisions to a City selected contractor for pricing and installation.

## SCHEDULE

The following outlines our anticipated schedule milestones of main tasks related to this work effort assuming authorization to proceed by August 17, 2017:

- Construction Plan Sheet, Special Provisions, and Construction Cost Opinion Final Deliverable – September 15, 2017
- Construction to begin in early-October and final restoration completed by May of 2018

## FEE

Based on the above outlined scope of services and assumptions, our proposed lump sum fee to perform this work is \$8,400. Our fee derivation is based on the following breakdown:

- 10 hours of project management, lead engineer, and QAQC related time at the standard blanket contract agreement rate of \$105/Hr.
- 70 hours of staff engineer related time (for all individual engineering staff assigned to the project) at the standard blanket contract agreement rate of \$105/Hr.



We appreciate the opportunity to provide professional services to the City of Novi on this project. If you have any questions related to our proposal, please do not hesitate to contact us.

Sincerely,  
OHM Advisors

A handwritten signature in black ink that reads "George A. Tsakoff". The signature is written in a cursive style and is positioned above a horizontal line.

George A. Tsakoff, PE  
Senior Project Manager

cc: James Stevens, PE, OHM Advisors