



Mr. Jim Prom
Bassett Creek Watershed Management Commission
7800 Golden Valley Road
Golden Valley, MN 55427

Page # 1
Invoice # 23270051-2020-1
Project # 23/27-0051
Client # 59
March 6, 2020

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
February 1, 2020 through February 28, 2020

ENGINEERING

TECHNICAL SERVICES

Communications with Medicine Lake consultant regarding MS4 requirements and alignment with BCWMC requirements; review 2019 budgets and revise 2020 tasks and budgets; communications with Plymouth city staff and their consultant regarding XP SWMM and P8 model request, and prepare and send conditional use agreement, XP SWMM model, P8 model and GIS data to consultant; communications with Plymouth staff and internal staff regarding Cavanaugh Lake; communications with Minnetonka consultant regarding XP SWMM model; communications with administrator and internal staff regarding Minneapolis floodplain official controls; communications with administrator regarding financial reports; communications with administrator and internal staff regarding BCWMC AIS suitability tool and MDNR; follow-up from February Commission meeting regarding potential CIP funding of a street sweeper and effectiveness of street sweeping, include review of literature and MPCA information, review of Shingle Creek WMC CIP policy, and communications with administrator and internal staff; internal communications regarding MPCA monitoring of the Sweeney Branch; follow-up from February Commission meeting regarding non-fee/preliminary reviews, including review and summary of 2015 - 2019 non-fee/preliminary review charges, internal communications regarding new RPBCWD policy, and communications with administrator summarizing findings; coordination and communications with administrator and internal staff regarding follow-up to January 29 MPCA MTD meeting and March 2 MTD work group meeting, and prepare for March 2 MTD work group meeting, including review of Contech submittal and draft Capitol Region WD memo; update linear projects table; communications with internal staff and administrator regarding access to Lake Cavanaugh to identify potential CAMP volunteer; internal communications regarding 2021 water quality monitoring budgeting needs, including review of 2019 budgets/costs, and 2020 monitoring future reporting; and communications with administrator regarding new MDNR area hydrologist.

James P. Herbert, Principal Engineer/Scientist		
3.0 hours @ \$200.00 per hour.....	\$	600.00
Karen L. Chandler, Principal Engineer/Scientist		
24.8 hours @ \$180.00 per hour.....	\$	4,464.00

Gregory J. Wilson, Engineer/Scientist/Specialist IV 5.1 hours @ \$170.00 per hour	\$	867.00
Sterling 'Greg' Williams, Engineer/Scientist/Specialist III 0.5 hours @ \$145.00 per hour	\$	72.50
Ross S. Mullen, Engineer/Scientist/Specialist II 0.5 hours @ \$120.00 per hour	\$	60.00
Josh P. Phillips, Engineer/Scientist/Specialist II 2.6 hours @ \$105.00 per hour	\$	273.00
Joshua R. Vosejka, Engineer/Scientist/Specialist I 1.5 hours @ \$90.00 per hour	\$	<u>135.00</u>
<i>Subtotal, Technical Services</i>	\$	6,471.50

MONTHLY MEETING PREPARATION

Communications/coordination with administrator and internal staff regarding draft/final agenda and meeting packet for February Commission meeting; review/edit draft January meeting minutes; review/edit administrator's draft plan amendment memo for the February Commission meeting; prepare for February Commission meeting, including review meeting packet, hold pre-meeting conference call with Chair Prom and administrator, review/edit Cavanaugh and Northwood Lakes presentation for meeting, and prepare notes for TAC agenda item; and communications with administrator and internal staff regarding follow-up items from February Commission meeting and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 4.5 hours @ \$200.00 per hour	\$	900.00
Karen L. Chandler, Principal Engineer/Scientist 25.0 hours @ \$180.00 per hour	\$	4,500.00
Technicians/Administrative	\$	<u>598.50</u>
<i>Subtotal, Monthly Meeting Preparation</i>	\$	5,998.50

TAC PREPARATION

Review/edit administrator's draft memo to Commission regarding TAC recommendations for the BCWMC water monitoring program and 5-year CIP.

Karen L. Chandler, Principal Engineer/Scientist 1.8 hours @ \$180.00 per hour	\$	324.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 0.2 hours @ \$140.00 per hour	\$	<u>28.00</u>
<i>Subtotal, TAC Preparation</i>	\$	352.00

Subtotal Technical Services* \$ **12,822.00*

PLAT REVIEW

Plymouth Senior Living (2019-24)

Follow-up communications with applicant.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$200.00 per hour	\$ 100.00
<i>Subtotal, Plymouth Senior Living</i>	<i>\$ 100.00</i>

Four Seasons Mall Redevelopment (2019-25)

Preliminary review of resubmittal.

James P. Herbert, Principal Engineer/Scientist 0.3 hours @ \$200.00 per hour	\$ 60.00
<i>Subtotal, Four Seasons Mall Redevelopment</i>	<i>\$ 60.00</i>

Plymouth 2020 Street Reconstruction (2019-28)

Review grading, drainage and erosion control plans for erosion and sediment control; prepare review memo for February Commission meeting; and prepare and send comment letter to the city.

James P. Herbert, Principal Engineer/Scientist 2.8 hours @ \$200.00 per hour	\$ 560.00
Josh P. Phillips, Engineer/Scientist/Specialist II 10.6 hours @ \$105.00 per hour	\$ 1,113.00
Louise L. Heffernan, Engineer/Scientist/Specialist I 18.7 hours @ \$100.00 per hour	\$ 1,870.00
Edward M. Anderson, Engineer/Scientist/Specialist I 1.6 hours @ \$90.00 per hour	\$ 144.00
Technicians/Administrative	\$ 10.00
<i>Subtotal, Plymouth 2020 Street Reconstruction</i>	<i>\$ 3,697.00</i>

Golden Valley 2020 PMP (2020-01)

Review grading, drainage and erosion control plans for erosion and sediment control; prepare review memo for February Commission meeting; prepare and send comment letter to the city; and communications with city staff.

James P. Herbert, Principal Engineer/Scientist 2.5 hours @ \$200.00 per hour	\$ 500.00
Karen L. Chandler, Principal Engineer/Scientist 1.2 hours @ \$180.00 per hour	\$ 216.00
Josh P. Phillips, Engineer/Scientist/Specialist II 4.5 hours @ \$105.00 per hour	\$ 472.50
Louise L. Heffernan, Engineer/Scientist/Specialist I 14.9 hours @ \$100.00 per hour	\$ 1,490.00

Edward M. Anderson, Engineer/Scientist/Specialist I 1.0 hours @ \$90.00 per hour	\$ 90.00
Technicians/Administrative.....	\$ 50.00
Expenses (Postage)	\$ 0.50
<i>Subtotal, Golden Valley 2020 PMP</i>	<i>\$ 2,819.00</i>

Penn Avenue Union (2020-02)

Review grading, drainage and erosion control plans for erosion and sediment control; communications with applicant; and prepare draft comment letter to city staff.

James P. Herbert, Principal Engineer/Scientist 3.3 hours @ \$200.00 per hour	\$ 660.00
Josh P. Phillips, Engineer/Scientist/Specialist II 1.9 hours @ \$105.00 per hour	\$ 199.50
Louise L. Heffernan, Engineer/Scientist/Specialist I 6.7 hours @ \$100.00 per hour	\$ 670.00
Technicians/Administrative.....	\$ 50.00
Expenses (Postage)	\$ 0.50
<i>Subtotal, Penn Avenue Union.....</i>	<i>\$ 1,580.00</i>

Plymouth 2020 Pond Maintenance (2020-03)

Preliminary review of grading, drainage and erosion control plans; and communications with applicant.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$200.00 per hour	\$ 100.00
Josh P. Phillips, Engineer/Scientist/Specialist II 1.9 hours @ \$105.00 per hour	\$ 199.50
Technicians/Administrative.....	\$ 50.00
<i>Subtotal, Plymouth 2020 Pond Maintenance.....</i>	<i>\$ 349.50</i>

CenterPoint 2020 MBLNW (2020-04)

Preliminary review of grading, drainage and erosion control plans.

James P. Herbert, Principal Engineer/Scientist 1.3 hours @ \$200.00 per hour	\$ 260.00
Josh P. Phillips, Engineer/Scientist/Specialist II 0.5 hours @ \$105.00 per hour	\$ 52.50
Technicians/Administrative.....	\$ 80.00
Expenses (Postage)	\$ 0.50
<i>Subtotal, CenterPoint 2020 MBLNW.....</i>	<i>\$ 393.50</i>

Sweeney Lake Shores (PUD) (2020-05)

Plat review set-up.

Technicians/Administrative.....	\$	50.00
Expenses (Postage)	\$	<u>0.50</u>
<i>Subtotal, Sweeney Lake Shores (PUD).....</i>	<i>\$</i>	<i>50.50</i>

Leef South (2020-06)

Review concept plans/revised concept plans; communications with city staff, administrator, applicant, and internal staff regarding parking structure and floodplain requirements; and preliminary review of grading, drainage and erosion control plans.

James P. Herbert, Principal Engineer/Scientist 4.6 hours @ \$200.00 per hour.....	\$	920.00
Josh P. Phillips, Engineer/Scientist/Specialist II 1.3 hours @ \$105.00 per hour.....	\$	136.50
Technicians/Administrative.....	\$	50.00
Expenses (Postage)	\$	<u>0.50</u>
<i>Subtotal, Leef South.....</i>	<i>\$</i>	<i>1,107.00</i>

Subtotal Plat Review.....\$ 10,156.00

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Review three MDNR permit applications submitted to BCWMC for a gas line project and a lake outlet project, and provide comments to administrator/MDNR; preliminary review of Golden Valley trail project for floodplain impacts and creek crossing; and preliminary review and correspondence with Hennepin County staff and their consultants regarding CSAH 81 bridge reconstruction project.

James P. Herbert, Principal Engineer/Scientist 8.2 hours @ \$200.00 per hour.....	\$	1,640.00
Karen L. Chandler, Principal Engineer/Scientist 2.1 hours @ \$180.00 per hour.....	\$	378.00
Ross S. Mullen, Engineer/Scientist/Specialist II 0.5 hours @ \$120.00 per hour.....	\$	60.00
Josh P. Phillips, Engineer/Scientist/Specialist II 0.5 hours @ \$105.00 per hour.....	\$	<u>52.50</u>
Subtotal, Preliminary Communications.....	\$	2,130.50

NON-FEE REVIEWS

Subtotal Non-Fee Reviews	\$	0.00
Subtotal Preliminary Communications and Non-Fee Reviews	\$	2,130.50

COMMISSION AND TAC MEETINGS

Attend February 20 Commission meeting, including presentation of Northwood and Cavanaugh Lakes water quality monitoring results.

Karen L. Chandler, Principal Engineer/Scientist 4.0 hours @ \$180.00 per hour	\$	720.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 2.2 hours @ \$140.00 per hour	\$	308.00
Expenses (Mileage)	\$	<u>9.20</u>
Subtotal, Commission and TAC Meetings	\$	1,037.20

SURVEYS & STUDIES

Subtotal Surveys & Studies	\$	0.00
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WATER QUALITY/MONITORING

General Water Quality

Attend February 5 Minneapolis bacteria study meeting, and make arrangements for MCES WOMP meeting to discuss chloride loads/trends.

Gregory J. Wilson, Engineer/Scientist/Specialist IV 3.0 hours @ \$170.00 per hour	\$	<u>510.00</u>
Subtotal, General Water Quality	\$	510.00

Sweeney Branch Monitoring Year 1

Prepare equipment for monitoring; communications with MPCA; and internal communications regarding snowmelt runoff monitoring.

Gregory J. Wilson, Engineer/Scientist/Specialist IV 0.5 hours @ \$170.00 per hour	\$	85.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 0.5 hours @ \$140.00 per hour	\$	70.00
Technicians/Administrative	\$	18.00
Expenses (Verizon Wireless)	\$	<u>44.08</u>
Subtotal, Sweeney Branch Monitoring Year 1	\$	217.08

2019 Water Quality Monitoring Reports (Carryover)

Northwood and Cavanaugh Lakes: prepare final reports for 2019 water quality monitoring, including preparing historical phytoplankton and zooplankton graphs, developing inset maps, revising water quality graphs, and revising draft reports per administrator review/comments, prepare presentation for February Commission meeting, and edit presentation per administrator review/comments; North Branch of Bassett Creek: review, summarize and QA/QC 2018 - 2019 water monitoring data, load water monitoring data into EQulS, prepare graphs of TSS, chlorides, flow, specific conductance, metals, E. coli, chlorophyll a, temperature, including graphs comparing water quality data with MPCA standards, and complete draft combined biotic index and water monitoring report for internal review; Main Stem of Bassett Creek: develop preliminary draft of Main Stem biotic index report.

Karen L. Chandler, Principal Engineer/Scientist 2.8 hours @ \$180.00 per hour	\$ 504.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 48.4 hours @ \$140.00 per hour	\$ 6,776.00
Sterling 'Greg' Williams, Engineer/Scientist/Specialist III 0.5 hours @ \$145.00 per hour	\$ 72.50
Christopher J. Bonick, Engineer/Scientist/Specialist III 19.5 hours @ \$130.00 per hour	\$ 2,535.00
Kelly A. Wild, Engineer/Scientist/Specialist II 0.2 hours @ \$100.00 per hour	\$ 20.00
Rachel C. Mitcavish, Engineer/Scientist/Specialist I 3.1 hours @ \$90.00 per hour	\$ 279.00
Technicians/Administrative.....	<u>\$ 2,748.00</u>
<i>Subtotal, 2019 Water Quality Monitoring Reports (Carryover)</i>	<i>\$ 12,934.50</i>
<i>Subtotal, Water Quality/Monitoring.....</i>	<i>\$ 13,661.58</i>

WATER QUANTITY

Measure and review lake level elevations as part of lake-gauging program.

Technicians/Administrative.....	\$ 400.00
Expenses (2WD vehicle/mileage)	<u>\$ 65.00</u>
<i>Subtotal, Water Quantity.....</i>	<i>\$ 465.00</i>

FLOOD CONTROL PROJECT ANNUAL INSPECTION & DOUBLE BOX CULVERT INSPECTION

Internal communications regarding double box culvert inspection report status.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$200.00 per hour	<u>\$ 100.00</u>
<i>Subtotal, Flood Control Annual Proj Inspect&Dbl Box Culvert \$</i>	<i>100.00</i>

DEEP TUNNEL INSPECTION

Follow-up communications with Corps of Engineers staff regarding schedule for deep tunnel inspection.

James P. Herbert, Principal Engineer/Scientist
 0.5 hours @ \$200.00 per hour \$ 100.00
Subtotal, Deep Tunnel Inspections \$ 100.00

TOTAL ENGINEERING \$ 40,472.28

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

February 28, 2020 site visit to check ice condition/attempt flow measurement; and prepare summary of January 15, 2020 MCES Twin Cities Water Monitoring and Data Assessment Group meeting.

Christopher J. Bonick, Engineer/Scientist/Specialist III
 4.0 hours @ \$130.00 per hour \$ 520.00
 Technicians/Administrative..... \$ 80.00
Subtotal, Watershed Outlet Monitoring Program \$ 600.00

TOTAL WOMP \$ 600.00

APM/AIS WORK

TOTAL APM/AIS WORK..... \$ 0.00

CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

SCHAPER POND 2018 MONITORING AND REPORTING (SL-3)

Create maps; and compute the volume differences between the 2014 and 2018 bathymetric surveys using Civil 3D.

Gregory J. Wilson, Engineer/Scientist/Specialist IV
 5.3 hours @ \$170.00 per hour \$ 901.00
 Technicians/Administrative..... \$ 2,245.00
Subtotal, Schaper Pond 2018 Monitoring and Reporting \$ 3,146.00

MAIN STEM DREDGING PROJECT FEASIBILITY STUDY (2021) (BC-7)

Prepare boards and content for public engagement meeting; address and respond to reviewer comments on boards; discussions regarding TCLP sediment sample analysis, coordination with testing lab, data review and management, and laboratory expenses; develop dredging contours in more detail; perform water quality analysis, including requesting MCES monitoring data, review, computations, developing stage storage curves, and internal meetings; update XP-SWMM models and compile results; coordinate

with MDNR regarding takings permit for aquatic species; prepare for and attend February 27 public meeting; develop report text; and project email updates.

Karen L. Chandler, Principal Engineer/Scientist 12.0 hours @ \$180.00 per hour.....	\$ 2,160.00
Gregory J. Wilson, Engineer/Scientist/Specialist IV 20.5 hours @ \$170.00 per hour.....	\$ 3,485.00
Jennifer L. Brekken, Engineer/Scientist/Specialist IV 2.2 hours @ \$160.00 per hour.....	\$ 352.00
Daniel M. Tix, Engineer/Scientist/Specialist III 0.4 hours @ \$150.00 per hour.....	\$ 60.00
Terry A. Olson, Engineer/Scientist/Specialist III 1.2 hours @ \$145.00 per hour.....	\$ 159.50
Patrick E. Brockamp, Engineer/Scientist/Specialist II 46.7 hours @ \$115.00 per hour.....	\$ 5,370.50
Adam K. Howard, Engineer/Scientist/Specialist III 2.1 hours @ \$130.00 per hour.....	\$ 273.00
Kevin D. Menken, Engineer/Scientist/Specialist II 2.5 hours @ \$120.00 per hour.....	\$ 300.00
Brendan H. Dougherty, Engineer/Scientist/Specialist II 12.9 hours @ \$100.00 per hour.....	\$ 1,290.00
Lulu Fang, Engineer/Scientist/Specialist II 8.5 hours @ \$105.00 per hour.....	\$ 892.50
Erin E. Feehily, Engineer/Scientist/Specialist I 1.9 hours @ \$90.00 per hour.....	\$ 171.00
Tyler A. Conley, Engineer/Scientist/Specialist I 4.3 hours @ \$85.00 per hour.....	\$ 365.50
Technicians/Administrative.....	\$ 481.00
Expenses (Pace Analytical).....	<u>\$ 184.00</u>

Subtotal, Main Stem Dredging Project Feasibility Study.....\$ 15,544.00

MOUNT OLIVET STREAM STABILIZATION PROJECT (2021)(ML-20) AND PARKERS LAKE DRAINAGE IMPROVEMENT PROJECT (2021)(PL-7) FEASIBILITY STUDY

Mount Olivet Stream Stabilization Project Feasibility Study (2021)(ML-20)

Revise and complete conceptual alternatives and figures; revise stream erosion and pollutant removal estimates; develop cost estimates for alternatives; revise and complete boards for public meeting; prepare for and attend February 12 public meeting; and begin preparing draft report.

Karen L. Chandler, Principal Engineer/Scientist 1.1 hours @ \$180.00 per hour	\$	198.00
Adam K. Howard, Engineer/Scientist/Specialist III 12.3 hours @ \$130.00 per hour.....	\$	1,599.00
Kallie B, Doeden, Engineer/Scientist/Specialist II 8.5 hours @ \$100.00 per hour	\$	850.00
Brendan H. Dougherty, Engineer/Scientist/Specialist II 0.1 hours @ \$100.00 per hour	\$	10.00
Samantha A. Beck, Engineer/Scientist/Specialist I 0.6 hours @ \$90.00 per hour	\$	54.00
Colleen M. Long, Engineer/Scientist/Specialist I 2.1 hours @ \$85.00 per hour	\$	178.50
Technicians/Administrative.....	\$	<u>569.50</u>
<i>Subtotal, Mount Olivet Stream Stabilization Project Feas Study.....</i>		<i>\$ 3,459.00</i>

Parkers Lake Drainage Improvement Project (2021)(PL-7)

Compile tree survey data; revise and complete conceptual alternatives and figures; revise stream erosion and pollutant removal estimates; revise cost estimates for stream and water quality alternatives; revise and complete boards for public meeting; prepare for, attend and follow-up from February 12 public meeting; review XP-SWMM modeling results for alternatives analysis; and begin preparing draft report.

Karen L. Chandler, Principal Engineer/Scientist 2.3 hours @ \$180.00 per hour	\$	414.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 15.1 hours @ \$145.00 per hour.....	\$	2,189.50
Adam K. Howard, Engineer/Scientist/Specialist III 12.7 hours @ \$130.00 per hour.....	\$	1,651.00
Brendan H. Dougherty, Engineer/Scientist/Specialist II 0.1 hours @ \$100.00 per hour.....	\$	10.00
Kallie B, Doeden, Engineer/Scientist/Specialist II 12.6 hours @ \$100.00 per hour	\$	1,260.00
Samantha A. Beck, Engineer/Scientist/Specialist I 1.0 hours @ \$90.00 per hour	\$	90.00
Colleen M. Long, Engineer/Scientist/Specialist I 2.1 hours @ \$85.00 per hour	\$	178.50
Technicians/Administrative.....	\$	1,537.00
Expenses (Mileage)	\$	<u>6.90</u>
<i>Subtotal, Parkers Lake Drainage Improvement Project Feas Study</i>		<i>\$ 7,336.90</i>

**Subtotal, Mt. Olivet Stream Stabilization Project & Parkers
 Lake Drainage Improvement Project Feasibility Study.....\$ 10,795.90**

SWEENEY LAKE WATER QUALITY IMPROVEMENT PROJECT (2020) (SL-8)

Prepare and send request for quotes for curly-leaf pondweed herbicide treatment; review received quote; internal communications regarding pre-treatment temperature measurements; and communications with commercial fisherman and administrator regarding commercial fishing of Sweeney Lake.

Gregory J. Wilson, Engineer/Scientist/Specialist IV 3.0 hours @ \$170.00 per hour	\$ 510.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 2.4 hours @ \$140.00 per hour	\$ 336.00
Subtotal, Sweeney Lake Water Quality Improvements.....	\$ 846.00
TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)	\$ 30,331.90

TMDL WORK

TOTAL TMDL WORK.....\$ 0.00

IMPROVED FEMA FLOODPLAIN MODELING & MAPPING (MDNR)

**TOTAL IMPROVED FEMA FLOODPLAIN MODELING &
 MAPPING (MDNR).....\$ 0.00**

SUMMARY TOTALS

Total Engineering	\$ 40,472.28
Total WOMP.....	\$ 600.00
Total APM/AIS Work.....	\$ 0.00
Total TMDL Work	\$ 0.00
Total Capital Improvement Projects (Tax Levy).....	\$ 30,331.90
Total Improved FEMA Floodplain Modeling & Mapping (MDNR).....	\$ 0.00
TOTAL PAYABLE.....	\$ 71,404.18

Barr declares under the penalties of law that this account, claim or demand is just and that no part of it has been paid.

