



resourceful. naturally.  
engineering and environmental consultants

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

Page # 1  
Invoice # 23270051-2017-9  
Project # 23/27-0051  
Client # 59  
November 3, 2017

Invoice of Account with  
BARR ENGINEERING COMPANY

For professional services during the period of  
September 30, 2017 through October 27, 2017

**ENGINEERING**

TECHNICAL SERVICES

Communications with administrator, internal meeting, and meeting with administrator regarding pond prioritization and P8 model results; communications with administrator regarding chloride next steps and CIP projects; communications with Golden Valley staff regarding flood elevation write-up; internal discussion regarding reuse calculators; communications with internal staff and administrator regarding new water quality testing lab; communications with internal staff and administrator regarding Table 2-9 corrections and provide revised table to administrator for inclusion in BCWMC plan amendment/revision; burn CDs and print plan updates and provide to administrator for distribution; internal communications regarding limnological services from potential vendor; revise linear project tracking table; communications with internal staff, administrator and MDNR staff to set up FEMA modeling meeting, review MDNR's FEMA modeling scope, and internal meeting to review MDNR's FEMA modeling scope and prepare for October 30th meeting with MDNR staff; review 2018 budget background for stream water quality monitoring; communications with Plymouth, TRPD and MDNR staff regarding Medicine Lake fisheries information, review 1981-2017 Medicine Lake fish survey data and prepare graphical summary of carp numbers in Medicine Lake, follow-up communications with MDNR regarding Medicine Lake fish surveys and carp population, and send email to administrator summarizing results of review; and review administrator's records retention table.

Karen L. Chandler, Principal Engineer/Scientist 30.1 hours @ \$170.00 per hour .....	\$ 5,117.00
Gregory J. Wilson, Consultant/Advisor 5.2 hours @ \$155.00 per hour .....	\$ 806.00
Erin L. Anderson Wenz, Consultant/Advisor 3.1 hours @ \$160.00 per hour .....	\$ 496.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 2.5 hours @ \$130.00 per hour .....	\$ 325.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 2.7 hours @ \$130.00 per hour .....	\$ 351.00

Sterling G. Williams, Engineer/Scientist/Specialist III 2.0 hours @ \$130.00 per hour .....	\$ 260.00
Ross S. Mullen, Engineer/Scientist/Specialist II 5.5 hours @ \$95.00 per hour .....	\$ 522.50
Josh P. Phillips, Engineer/Scientist/Specialist I 5.2 hours @ \$75.00 per hour.....	\$ <u>390.00</u>
<i>Subtotal, Technical Services.....</i>	<i>\$ 8,267.50</i>

MONTHLY MEETING PREPARATION

Communications/coordination with administrator regarding draft/final agenda and meeting packet for October Commission meeting; review/edit draft September meeting minutes; prepare for October Commission meeting, including setting up and attending pre-meeting conference call with Vice Chair Mueller and administrator; and coordination and communications with administrator and internal staff regarding follow-up tasks from October Commission meeting and upcoming Commission meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 4.5 hours @ \$190.00 per hour .....	\$ 855.00
Karen L. Chandler, Principal Engineer/Scientist 13.3 hours @ \$170.00 per hour .....	\$ 2,261.00
Technicians/Administrative.....	\$ <u>380.00</u>
<i>Subtotal, Monthly Meeting Preparation.....</i>	<i>\$ 3,496.00</i>

***Subtotal Technical Services ..... \$ 11,763.50***

PLAT REVIEW

SWLRT (2016-2017) (2016-24)

Communications with Metro Transit staff regarding BCWMC review process.

Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$170.00 per hour .....	\$ <u>85.00</u>
<i>Subtotal, SWLRT.....</i>	<i>\$ 85.00</i>

Ridgedale Corner Shoppes (2016-34)

Review resubmittal; and communications with city staff and applicant.

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$190.00 per hour .....	\$ 190.00
Josh P. Phillips, Engineer/Scientist/Specialist I 2.9 hours @ \$75.00 per hour.....	\$ 217.50
Technicians/Administrative.....	\$ <u>27.00</u>
<i>Subtotal, Ridgedale Corner Shoppes.....</i>	<i>\$ 434.50</i>

GV/MPLS Interceptor Rehab (2017-11)

Review revised grading, drainage and erosion control plans; and prepare/send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 0.9 hours @ \$190.00 per hour .....	\$ 171.00
Josh P. Phillips, Engineer/Scientist/Specialist I 2.4 hours @ \$75.00 per hour.....	\$ <u>180.00</u>
<i>Subtotal, GV/MPLS Interceptor Rehab</i> .....	\$ 351.00

CSAH 66 Culvert Replacement (2017-19)

Attend meeting with Golden Valley and Hennepin County staff regarding project.

James P. Herbert, Principal Engineer/Scientist 2.2 hours @ \$190.00 per hour .....	\$ 418.00
Expenses (Mileage) .....	\$ <u>12.84</u>
<i>Subtotal, CSAH 66 Culvert Replacement</i> .....	\$ 430.84

Shelard Village Site Improvements (2017-30)

Communications with applicant.

James P. Herbert, Principal Engineer/Scientist 0.3 hours @ \$190.00 per hour .....	\$ 57.00
Josh P. Phillips, Engineer/Scientist/Specialist I 0.2 hours @ \$75.00 per hour.....	\$ <u>15.00</u>
<i>Subtotal, Shelard Village Site Improvements</i> .....	\$ 72.00

Metro Transit C Line BRT (2017-33)

Review grading, drainage and erosion control plans; prepare review memo for October Commission meeting and send to administrator; prepare and send approval/comment letter to city staff; communications with applicant; review revised plans; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist 2.2 hours @ \$190.00 per hour .....	\$ 418.00
Karen L. Chandler, Principal Engineer/Scientist 0.7 hours @ \$170.00 per hour .....	\$ 119.00
Josh P. Phillips, Engineer/Scientist/Specialist I 9.6 hours @ \$75.00 per hour.....	\$ <u>720.00</u>
<i>Subtotal, Metro Transit C Line BRT</i> .....	\$ 1,257.00

Westwood Hills Park-SLP WCA (2017-34)

Review wetland delineation report; prepare and submit Notice of Application; and send list of corrections to delineator.

Karen L. Chandler, Principal Engineer/Scientist 0.9 hours @ \$170.00 per hour .....	\$ 153.00
Karen S. Wold, Engineer/Scientist/Specialist II 2.1 hours @ \$120.00 per hour .....	\$ <u>252.00</u>
<i>Subtotal, Westwood Hills Park-SLP WCA .....</i>	<i>\$ 405.00</i>

Golden Valley Road Senior Living (2017-35)

Initial review.

James P. Herbert, Principal Engineer/Scientist 0.8 hours @ \$190.00 per hour .....	\$ 152.00
Technicians/Administrative.....	\$ <u>9.00</u>
<i>Subtotal, Golden Valley Road Senior Living.....</i>	<i>\$ 161.00</i>

Tennant Company Headquarters (2017-36)

Communications with applicant and internal staff.

James P. Herbert, Principal Engineer/Scientist 1.6 hours @ \$190.00 per hour .....	\$ 304.00
Karen L. Chandler, Principal Engineer/Scientist 0.3 hours @ \$170.00 per hour .....	\$ 51.00
Technicians/Administrative.....	\$ <u>9.00</u>
<i>Subtotal, Tennant Company Headquarters.....</i>	<i>\$ 364.00</i>

Mpls Impound Lot Facility Improvements (2017-37)

Initial review; and communications with applicant and internal staff.

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$190.00 per hour .....	\$ <u>190.00</u>
<i>Subtotal, Mpls Impound Lot Facility Improvements.....</i>	<i>\$ 190.00</i>

***Subtotal Plat Review..... \$ 3,750.34***

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Communications with Minneapolis staff and administrator regarding 241 Fremont project; communications with administrator regarding proposed Wirth Park Loppet pumping project; preliminary review and communications with Golden Valley staff regarding overlay project; review MDNR permit and provide email comments; communications with Crystal staff regarding potential work in floodplain at 2739 Vale Crest; and respond to questions from city's consultant regarding potential stormwater diversion project in Golden Valley.

James P. Herbert, Principal Engineer/Scientist 2.8 hours @ \$190.00 per hour .....	\$ 532.00
Karen L. Chandler, Principal Engineer/Scientist 0.4 hours @ \$170.00 per hour .....	\$ 68.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 0.4 hours @ \$130.00 per hour .....	\$ 52.00
Josh P. Phillips, Engineer/Scientist/Specialist I 2.7 hours @ \$75.00 per hour.....	\$ <u>202.50</u>

**Subtotal, Preliminary Communications.....\$ 854.50**

NON-FEE REVIEWS

**Subtotal Non-Fee Reviews .....\$ 0.00**

**Subtotal Preliminary Communications and Non-Fee Reviews .....\$ 854.50**

COMMISSION AND TAC MEETINGS

Attend October 19 Commission meeting.

Karen L. Chandler, Principal Engineer/Scientist 2.4 hours @ \$170.00 per hour .....	\$ <u>408.00</u>
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**Subtotal, Commission and TAC Meetings.....\$ 408.00**

SURVEYS & STUDIES

**Subtotal Surveys & Studies.....\$ 0.00**

WATER QUALITY/MONITORING

Sweeney Lake Aeration Study

Prepare and send progress update email; and internal discussion regarding sediment core monitoring.

Gregory J. Wilson, Consultant/Advisor 1.0 hours @ \$155.00 per hour .....	\$ <u>155.00</u>
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*Subtotal, Sweeney Lake Aeration Study.....\$ 155.00*

**Subtotal, Water Quality/Monitoring.....\$ 155.00**

**WATER QUANTITY**

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

Technicians/Administrative.....	\$	720.00
Expenses (Mileage/2WD field vehicle) .....	\$	<u>106.72</u>
<b>Subtotal, Water Quantity.....</b>	<b>\$</b>	<b>826.72</b>

**FLOOD CONTROL PROJECT INSPECTION**

Prepare for and perform 2017 annual BCWMC Flood Control Project structures inspection, including coordination with cities, internal team coordination, safety/confined space review, and coordination with Minneapolis staff on debris removal; upload and process photos from inspections; begin preparing inspection report; and coordination with Corps of Engineers staff on 2018 deep tunnel inspection.

James P. Herbert, Principal Engineer/Scientist 5.4 hours @ \$190.00 per hour .....	\$	1,026.00
Karen L. Chandler, Principal Engineer/Scientist 0.7 hours @ \$170.00 per hour .....	\$	119.00
Patrick E. Brockamp, Engineer/Scientist/Specialist I 13.9 hours @ \$90.00 per hour.....	\$	1,251.00
Josh P. Phillips, Engineer/Scientist/Specialist I 18.6 hours @ \$75.00 per hour.....	\$	1,395.00
Technicians/Administrative.....	\$	334.50
Expenses (Combust Gas Indicator/digital camera) .....	\$	<u>57.00</u>
<b>Subtotal, Flood Control Project Inspection .....</b>	<b>\$</b>	<b>4,182.50</b>

**TOTAL ENGINEERING .....\$ 21,940.56**

<b>AIS RAPID RESPONSE PLAN</b>
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AIS Rapid Response Plan

Develop work plan for AIS Rapid Response Plan.

Karen L. Chandler, Principal Engineer/Scientist 0.8 hours @ \$170.00 per hour .....	\$	136.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 3.9 hours @ \$130.00 per hour .....	\$	<u>507.00</u>
<i>Subtotal, AIS Rapid Response Plan.....</i>	<i>\$</i>	<i>643.00</i>

**TOTAL AIS RAPID RESPONSE PLAN .....\$ 643.00**

**ANNUAL REPORT**

**TOTAL ANNUAL REPORT .....\$ 0.00**

**PUBLIC COMMUNICATIONS**

**TOTAL PUBLIC COMMUNICATIONS .....\$ 0.00**

**WEBSITE**

**TOTAL WEBSITE .....\$ 0.00**

**WATERSHED OUTLET MONITORING PROGRAM (WOMP)**

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

Perform flow measurement at WOMP station, and download, review, and send file and data to MCES staff.

Christopher J. Bonick, Engineer/Scientist/Specialist II 3.5 hours @ \$120.00 per hour .....	\$ 420.00
Heather N. Hlavaty, Engineer/Scientist/Specialist I 3.5 hours @ \$90.00 per hour .....	\$ 315.00
Expenses (Mileage/2WD field vehicle) .....	\$ 37.31
<i>Subtotal, Watershed Outlet Monitoring Program .....</i>	<i>\$ 772.31</i>
<b>TOTAL WOMP .....</b>	<b>\$ 772.31</b>

**CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)**

WINNETKA POND EAST DREDGING (2018)(BCP-2)

Communications with administrator and Crystal staff regarding city council approval of agreement, including review of draft presentation.

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$190.00 per hour .....	\$ 190.00
<i>Subtotal, Winnetka Pond East Dredging (2018)(BCP-2).....</i>	<i>\$ 190.00</i>

SCHAPER POND EFFECTIVENESS MONITORING (SL-3)

Collect and composite water quality samples from storm events; send samples to lab for analysis; download, process and analyze monitoring data; maintain and service monitoring equipment; storm event planning; develop rating curves for inlet and outlet; troubleshoot and fix sample collection system; and evaluate quality assurance/quality control.

Gregory J. Wilson, Consultant/Advisor 6.3 hours @ \$155.00 per hour .....	\$	976.50
Terri A. Olson, Engineer/Scientist/Specialist III 0.4 hours @ \$130.00 per hour .....	\$	52.00
Christopher J. Bonick, Engineer/Scientist/Specialist II 3.0 hours @ \$120.00 per hour .....	\$	360.00
Heather N. Hlavaty, Engineer/Scientist/Specialist I 38.3 hours @ \$90.00 per hour .....	\$	3,447.00
Josh P. Phillips, Engineer/Scientist/Specialist I 2.0 hours @ \$75.00 per hour .....	\$	150.00
Technicians/Administrative.....	\$	632.50
Expenses (Mileage/Pace Analytical Services/Quicksilver Courier/auto sampler).....	\$	<u>3,098.37</u>
<i>Subtotal, Schaper Pond Effectiveness Monitoring .....</i>	\$	<i>8,716.37</i>

DECOLA PONDS B&C IMPROVEMENT PROJECT FEASIBILITY STUDY (2019) (BC-2, BC-3, BC-8)

Prepare for and attend October 6<sup>th</sup> project kick-off meeting; prepare and send project email updates to administrator; prepare wetland delineation report, including data forms and figures, and prepare joint permit application for wetland delineation review; prepare for and conduct topographic, utility and tree survey, download and process survey data, prepare Civil 3D drawing from survey data, and survey equipment expenses; conduct threatened and endangered species review and update/revise threatened and endangered species memo; conduct cultural resources review, and SHPO data processing/data request, and prepare maps; communications with Commissioner Welch, city staff and internal staff regarding environmental issues and need/appropriateness of test trenching, prepare memo for October Commission meeting regarding additional budget for environmental work and provide memo to administrator; prepare for and attend October 23<sup>rd</sup> meeting with city staff, administrator, Commissioner Harwell and alternate Commissioner McDonald Black regarding November open house logistics and boards, follow-up communications with administrator and city staff regarding boards, and begin board preparation; and compile previous models and data for concept development and evaluation.

Daniel J. Fetter, Principal Engineer/Scientist 1.8 hours @ \$200.00 per hour .....	\$	360.00
Karen L. Chandler, Principal Engineer/Scientist 9.9 hours @ \$170.00 per hour .....	\$	1,683.00
Jennifer L. Brekken, Engineer/Scientist/Specialist III 4.5 hours @ \$145.00 per hour .....	\$	652.50
Aaron M. Mielke, Engineer/Scientist/Specialist III 2.1 hours @ \$135.00 per hour .....	\$	283.50
Shanna R. Braun, Engineer/Scientist/Specialist III 1.0 hours @ \$130.00 per hour .....	\$	130.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 19.2 hours @ \$130.00 per hour .....	\$	2,496.00



Brian K. Burgner, Engineer/Scientist/Specialist II 24.6 hours @ \$95.00 per hour .....	\$ 2,337.00
James L. Lind, Engineer/Scientist/Specialist II 0.5 hours @ \$95.00 per hour .....	\$ 47.50
John W. Kubiak, Engineer/Scientist/Specialist II 1.0 hours @ \$115.00 per hour .....	\$ 115.00
Robert L. Jones, Engineer/Scientist/Specialist I 4.0 hours @ \$90.00 per hour .....	\$ 360.00
Edward M. Anderson, Engineer/Scientist/Specialist I 4.0 hours @ \$80.00 per hour .....	\$ 320.00
Joshua P. Vosejka, Engineer/Scientist/Specialist I 1.5 hours @ \$80.00 per hour .....	\$ 120.00
Megan R. Quinlan, Engineer/Scientist/Specialist I 0.3 hours @ \$65.00 per hour .....	\$ 19.50
Technicians/Administrative.....	\$ 18,195.50
Expenses (Mileage/2WD field/GPS survey system/differential GPS/lath/robotic total station) .....	<u>\$ 1,661.61</u>
<i>Subtotal, DeCola Ponds B&amp;C Feasibility Study.....</i>	<i>\$ 28,781.11</i>

WESTWOOD LAKE WATER QUALITY IMPROVEMENT PROJECT FEASIBILITY STUDY

Communications with city staff, administrator and internal staff regarding scheduling kick-off meeting, project status, and status of field work.

Karen L. Chandler, Principal Engineer/Scientist 0.7 hours @ \$170.00 per hour .....	\$ 119.00
Michelle A. Kimble, Engineer/Scientist/Specialist III 1.1 hours @ \$125.00 per hour .....	<u>\$ 137.50</u>
<i>Subtotal, Westwood Lake WQ Feasibility Study.....</i>	<i>\$ 256.50</i>

BRYN MAWR MEADOWS WATER QUALITY IMPROVEMENT PROJECT FEASIBILITY STUDY (2019) (BC-5)

Complete the site topographic and utility survey, download and process survey data, prepare Civil 3D drawing from survey data, and survey equipment expenses; communications with Commissioner Welch, city staff and internal staff regarding environmental issues and need/appropriateness of test trenching; prepare for and perform wetland delineation; communications with Minneapolis staff regarding MPRB master planning process; conduct cultural resources review, including mapping and SHPO data request; prepare for and attend October 23<sup>rd</sup> project kick-off meeting at Bryn Mawr Meadows Park with administrator, Commissioner Welch, Minneapolis staff and MPRB staff, including internal meeting to develop possible concepts for BMP treatment options; provide flood elevation for project area; and prepare draft notes from kick-off meeting.

Daniel J. Fetter, Principal Engineer/Scientist 0.5 hours @ \$200.00 per hour .....	\$ 100.00
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Kurt A. Leuthold, Principal Engineer/Scientist 10.7 hours @ \$175.00 per hour .....	\$ 1,872.50
Karen L. Chandler, Principal Engineer/Scientist 6.0 hours @ \$170.00 per hour .....	\$ 1,020.00
Jennifer L. Brekken, Engineer/Scientist/Specialist III 2.4 hours @ \$145.00 per hour .....	\$ 348.00
Michelle A. Kimble, Engineer/Scientist/Specialist III 10.4 hours @ \$125.00 per hour .....	\$ 1,300.00
Jennifer A. Koehler, Engineer/Scientist/Specialist III 2.5 hours @ \$130.00 per hour .....	\$ 325.00
Shanna R. Braun, Engineer/Scientist/Specialist III 1.5 hours @ \$130.00 per hour .....	\$ 195.00
Brian K. Burgner, Engineer/Scientist/Specialist II 10.4 hours @ \$95.00 per hour .....	\$ 988.00
Kelly R. Matson, Engineer/Scientist/Specialist II 0.5 hours @ \$95.00 per hour .....	\$ 47.50
Ross S. Mullen, Engineer/Scientist/Specialist II 0.5 hours @ \$95.00 per hour .....	\$ 47.50
Kimberly S. Baker, Engineer/Scientist/Specialist I 2.0 hours @ \$85.00 per hour .....	\$ 170.00
Josh P. Phillips, Engineer/Scientist/Specialist I 18.9 hours @ \$75.00 per hour .....	\$ 1,417.50
Technicians/Administrative.....	\$ 4,119.00
Expenses (Mileage/2WD vehicle/GPS survey system).....	\$ <u>714.31</u>
<i>Subtotal, Bryn Mawr Meadows Feasibility Study.....</i>	\$ 12,664.31

**TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy) .....\$ 50,608.29**

<b>TMDL WORK</b>
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TMDL IMPLEMENTATION REPORTING

**TOTAL TMDL WORK .....\$ 0.00**

<b>SUMMARY TOTALS</b>
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<b>Total Engineering .....</b>	<b>\$ 21,940.56</b>
<b>Total Annual Report/Website/Public Communications .....</b>	<b>\$ 0.00</b>
<b>Total AIP Rapid Response Plan .....</b>	<b>\$ 643.00</b>
<b>Total WOMP.....</b>	<b>\$ 772.31</b>
<b>Total Capital Improvement Projects (Tax Levy).....</b>	<b>\$ <u>50,608.29</u></b>
<b>TOTAL PAYABLE.....</b>	<b>\$ 73,964.16</b>

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



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