



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

Page # 1
Invoice # 23270051-2016-5
Project # 23/27-0051
Client # 59
July 8, 2016

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
May 28, 2016 through July 1, 2016

ENGINEERING

TECHNICAL SERVICES

Communications with commissioner Carlson regarding Medicine Lake projects and review process, and provide Jevne Park wetland map; prepare NPDES reporting (BCWMC reviews in city) for Golden Valley staff; communications with Minnetonka staff regarding Medicine Lake watershed mapping and provide mapping to city staff; review maps of stream restoration CIP project locations and provide to administrator; communications with administrator regarding potential need for plan amendment for Bassett Creek Park Pond and Winnetka Pond project; communications with administrator regarding Minneapolis Phase I SWMP report; review updated infiltration guidelines in DWSMAs; set up and hold conference call/meeting with BWSR staff and administrator regarding potential CWF grant applications; coordination with administrator regarding channel maintenance fund; and communications with administrator.

James P. Herbert, Principal Engineer/Scientist 2.0 hours @ \$180.00 per hour	\$ 360.00
Karen L. Chandler, Principal Engineer/Scientist 10.7 hours @ \$165.00 per hour	\$ 1,765.50
Gregory J. Wilson, Consultant/Advisor 1.5 hours @ \$155.00 per hour	\$ 232.50
<i>Subtotal, Technical Services.....</i>	<i>\$ 2,358.00</i>

MONTHLY MEETING PREPARATION

Communications/coordination with administrator regarding draft/final agenda and meeting packet for June 2016 meeting; review/edit draft May meeting minutes; prepare for June Commission meeting, including set up and attend pre-meeting conference call with chair de Lambert and administrator to review meeting agenda; provide grant tracking information to administrator; and coordination and communications with administrator and internal staff regarding follow-up tasks

from May and June Commission meetings and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist	
12.2 hours @ \$180.00 per hour	\$ 2,196.00
Karen L. Chandler, Consultant/Advisor	
15.2 hours @ \$165.00 per hour	\$ 2,508.00
Technicians/Administrative.....	\$ 522.50
<i>Subtotal, Monthly Meeting Preparation.....</i>	<i>\$ 5,226.50</i>

TAC PREPARATION

Review Flood Control Project agreements; provide information to counsel with question regarding road crossings and agreement status; communications with counsel regarding TAC recommendation about road crossings and effect on agreements; prepare materials for June 28 TAC meeting regarding FCP recommendations 1, 7, 8, and provide to administrator, including information regarding inspection costs and map of tunnel system; and communications with administrator regarding TAC meeting follow-up and memo.

James P. Herbert, Principal Engineer/Scientist	
4.3 hours @ \$180.00 per hour	\$ 774.00
Karen L. Chandler, Principal Engineer/Scientist	
10.4 hours @ \$165.00 per hour	\$ 1,716.00
Megan J. Wika, Engineer/Scientist/Specialist I	
1.8 hours @ \$70.00 per hour.....	\$ 126.00
<i>Subtotal, TAC Preparation.....</i>	<i>\$ 2,616.00</i>
<i>Subtotal Technical Services</i>	<i>\$ 10,200.50</i>

PLAT REVIEW

Waterford Innovation Center (2015-34)

Communications with applicant and coordination with city staff.

James P. Herbert, Principal Engineer Scientist	
1.0 hours @ \$180.00 per hour	\$ 180.00
<i>Subtotal, Waterford Innovation Center.....</i>	<i>\$ 180.00</i>

Armstrong High School Baseball Field Improvements (2016-11)

Communications with applicant.

James P. Herbert, Principal Engineer/Scientist	
0.3 hours @ \$180.00 per hour	\$ 54.00
<i>Subtotal, Armstrong HS Baseball Field Improvements.....</i>	<i>\$ 54.00</i>

Pilgrim Lane Elementary Additions (2016-12)

Review revised grading, drainage and erosion control plans, and communications with applicant.

James P. Herbert, Principal Engineer/Scientist	
0.2 hours @ \$180.00 per hour	\$ 36.00
Josh P. Phillips, Engineer/Scientist/Specialist I	
1.5 hours @ \$70.00 per hour	\$ 105.00
<i>Subtotal, Pilgrim Lane Elementary Additions</i>	<i>\$ 141.00</i>

Little Newtons Addition (2016-13)

Review revised grading, drainage and erosion control plans.

James P. Herbert, Principal Engineer/Scientist	
0.5 hours @ \$180.00 per hour	\$ 90.00
<i>Subtotal, Little Newtons Addition</i>	<i>\$ 90.00</i>

Mortenson Headquarters Addition (2016-14)

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

James P. Herbert, Principal Engineer/Scientist	
2.3 hours @ \$180.00 per hour	\$ 414.00
Adam K. Howard, Engineer/Scientist/Specialist II	
0.9 hours @ \$100.00 per hour	\$ 90.00
Josh P. Phillips, Engineer/Scientist/Specialist I	
8.8 hours @ \$70.00 per hour	\$ 616.00
<i>Subtotal, Mortenson Headquarters Addition</i>	<i>\$ 1,120.00</i>

1143 South Shore Drive-Medicine Lake WCA (2016-16)

Prepare wetland delineation Notice of Decision, and discuss wetland violation restoration requirements with applicant; communications with commissioner Welch, internal staff, and TEP members regarding restoration requirements; submit wetland delineation Notice of Decision and list of conditions regarding the wetland restoration plan; review revised restoration plan and additional documentation, including survey elevation information, and provide comments to applicant.

James P. Herbert, Principal Engineer/Scientist	
0.5 hours @ \$180.00 per hour	\$ 90.00
Karen L. Chandler, Principal Engineer/Scientist	
0.8 hours @ \$165.00 per hour	\$ 132.00
Karen S. Wold, Engineer/Scientist/Specialist II	
8.1 hours @ \$120.00 per hour	\$ 972.00
<i>Subtotal, 1143 South Shore Dr-Med Lake WCA</i>	<i>\$ 1,194.00</i>

SWLRT Minneapolis (2016-17)

Review grading, drainage, and erosion control plans; review stormwater management plans, MIDS calculations, and model results; communications with SWLRT staff; internal meetings; prepare review memo and map for June Commission meeting and provide to administrator; communications with administrator regarding comments on draft memo; and prepare and send comment letter to city staff.

James P. Herbert, Principal Engineer/Scientist	
6.6 hours @ \$180.00 per hour	\$ 1,188.00
Karen L. Chandler, Principal Engineer/Scientist	
6.1 hours @ \$165.00 per hour	\$ 1,006.50
Jennifer A. Koehler, Engineer/Scientist/Specialist III	
13.9 hours @ \$125.00 per hour	\$ 1,737.50
Josh P. Phillips, Engineer/Scientist/Specialist I	
0.3 hours @ \$70.00 per hour	\$ 21.00
Technicians/Administrative	\$ <u>1,308.00</u>
<i>Subtotal, SWLRT Minneapolis</i>	<i>\$ 5,261.00</i>

Plymouth PW Campus Facility Addition (2016-19)

Review grading, drainage and erosion control plans; coordination with city staff; and prepare approval/comment letter to city staff.

James P. Herbert, Principal Engineer/Scientist	
5.0 hours @ \$180.00 per hour	\$ 900.00
Josh P. Phillips, Engineer/Scientist/Specialist I	
3.4 hours @ \$70.00 per hour	\$ <u>238.00</u>
<i>Subtotal, Plymouth PW Campus Facility Addition</i>	<i>\$ 1,138.00</i>

Cherrywood Pointe (2016-20)

Preliminary review of grading, drainage and erosion control plans.

James P. Herbert, Principal Engineer/Scientist	
0.8 hours @ \$180.00 per hour	\$ <u>144.00</u>
<i>Subtotal, Cherrywood Pointe</i>	<i>\$ 144.00</i>

Tennant Company Dock/Plaza (2016-21)

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

James P. Herbert, Principal Engineer/Scientist	
2.5 hours @ \$180.00 per hour	\$ <u>450.00</u>
<i>Subtotal, Tennant Company Dock/Plaza</i>	<i>\$ 450.00</i>

Theodore Wirth Utility Improvements (2016-22)

Review plans; communications with applicant; prepare review memo, map and attachments for June Commission meeting and provide to administrator; and prepare and send final approval letter to city staff.

James P. Herbert, Principal Engineer/Scientist	
5.5 hours @ \$180.00 per hour	\$ 990.00
Karen L. Chandler, Principal Engineer/Scientist	
1.2 hours @ \$165.00 per hour	\$ 198.00
Josh P. Phillips, Engineer/Scientist/Specialist I	
2.5 hours @ \$70.00 per hour	\$ 175.00
<i>Subtotal, Theodore Wirth Utility Improvements</i>	<i>\$ 1,363.00</i>

Daugherty 2860 Evergreen Lane (2016-23)

Plat review set up and preliminary review.

James P. Herbert, Principal Engineer/Scientist	
0.5 hours @ \$180.00 per hour	\$ 90.00
Technicians/Administrative	\$ 45.00
<i>Subtotal, Daugherty 2860 Evergreen Lane</i>	<i>\$ 135.00</i>

Luther Support Center (2016-24)

Plat review set up and preliminary review.

James P. Herbert, Principal Engineer/Scientist	
0.5 hours @ \$180.00 per hour	\$ 90.00
Technicians/Administrative	\$ 45.00
<i>Subtotal, Luther Support Center</i>	<i>\$ 135.00</i>

Subtotal Plat Review \$ 11,405.00

PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

PRELIMINARY COMMUNICATIONS

Communications with consultants regarding proposed projects and BCWMC requirements; review of Breck School plan per Golden Valley staff request and communications with project consultant (determined project did not require BCWMC review); review historical correspondence regarding Glenwood Inglewood site per Minneapolis staff request; coordination with Minnetonka staff regarding TCO site; preliminary review of Met Council project and communications with Met Council staff; preliminary review of plans and reply to consultant regarding proposed linear utility project (per administrator request/referral); call from potential Medicine Lake resident regarding Medicine Lake property; and call from potential applicant about floodplain issues.

James P. Herbert, Principal Engineer/Scientist
8.5 hours @ \$180.00 per hour \$ 1,530.00

Karen L. Chandler, Consultant/Advisor
0.8 hours @ \$165.00 per hour \$ 132.00

Subtotal, Plat Review – Preliminary Communications.....\$ 1,662.00

NON-FEE REVIEWS

BLUE LINE LRT/BOTTINEAU TRANSITWAY

Follow-up with Blue Line LRT staff regarding horizontal filtration BMPs; provide Phase 1 XP-SWMM data (subwatersheds, nodes) to Blue Line LRT staff; and follow-up on Blue Line LRT data request.

Jennifer A. Koehler, Engineer/Scientist/Specialist III
1.4 hours @ \$125.00 per hour (6/1/16, 6/2/16, 6/22/16) \$ 175.00

Subtotal, Blue Line LRT/Bottineau Transitway.....\$ 175.00

BLUE LINE LRT WCA LGU ADMIN

Golden Valley

Communication with agent regarding wetland permit application submittal.

Karen S. Wold, Engineer/Scientist/Specialist II
0.1 hours @ \$120.00 per hour (5/29/16) \$ 12.00

Subtotal, Golden Valley.....\$ 12.00

Minneapolis

Communication with agent regarding wetland permit application submittal.

Karen S. Wold, Engineer/Scientist/Specialist II
0.1 hours @ \$120.00 per hour (5/29/16) \$ 12.00

Subtotal, Minneapolis.....\$ 12.00

Robbinsdale

Communication with agent regarding wetland permit application submittal.

Karen S. Wold, Engineer/Scientist/Specialist II
0.3 hours @ \$120.00 per hour (5/29/16, 6/28/16) \$ 36.00

Subtotal, Robbinsdale.....\$ 36.00

Subtotal Blue Line LRT WCA LGU Admin.....\$ 60.00

*Subtotal Blue Line LRT/Bottineau Transitway & Blue Line
LRT WCA LGU Admin.....\$ 235.00*

SP 2772-104 TH 169 (2016-15A)

Review grading, drainage and erosion control plans; and coordinate with MnDOT consultant.

James P. Herbert, Principal Engineer/Scientist
1.9 hours @ \$180.00 per hour \$ 342.00

Karen L. Chandler, Consultant/Advisor
0.3 hours @ \$165.00 per hour \$ 49.50

Josh P. Phillips, Engineer/Scientist/Specialist I
0.4 hours @ \$70.00 per hour..... \$ 28.00

Subtotal, SP 2772-104 TH 169..... \$ 419.50

SP 2772-105 TH 169 (2016-15B)

Review grading, drainage and erosion control plans; and coordinate with MnDOT consultant.

James P. Herbert, Principal Engineer/Scientist
3.0 hours @ \$180.00 per hour \$ 540.00

Josh P. Phillips, Engineer/Scientist/Specialist I
3.5 hours @ \$70.00 per hour..... \$ 245.00

Technicians/Administrative..... \$ 54.00

Subtotal, SP 2772-105 TH 169..... \$ 839.00

Subtotal Non-Fee Reviews \$ 1,493.50

Subtotal Preliminary Communications and Non-Fee Reviews \$ 3,155.50

COMMISSION AND TAC MEETINGS

Attend June 16 Commission meeting and June 28 TAC meeting.

James P. Herbert, Principal Engineer/Scientist
2.0 hours @ \$180.00 per hour \$ 360.00

Karen L. Chandler, Principal Engineer/Scientist
3.7 hours @ \$165.00 per hour \$ 610.50

Subtotal, Commission and TAC Meetings..... \$ 970.50

SURVEYS & STUDIES

APM/AIS TASK FORCE

Communications with Plymouth staff regarding Medicine Lake curlyleaf pondweed treatments and costs; conference call to administrator regarding June 28 APM/AIS meeting agenda, goals and presentation; review/edit June 28 meeting agenda; prepare draft presentation regarding aquatic invasive species and aquatic plant management and revise per administrator comments; attend June 28 APM/AIS meeting; and communications with administrator regarding APM/AIS meeting follow-up tasks.

Karen L. Chandler, Principal Engineer/Scientist
11.1 hours @ \$165.00 per hour \$ 1,831.50

Margaret R. Rattei, Engineer/Scientist/Specialist III
19.2 hours @ \$130.00 per hour \$ 2,496.00

Expenses (Mileage)	\$ 15.12
<i>Subtotal, APM/AIS Task Force</i>	<i>\$ 4,342.62</i>

2016 TOUR

Prepare/update tour map and provide to administrator; prepare for macroinvertebrate, habitat and water quality monitoring demonstration tour stop, including visit to Fruen Mill site, complete habitat evaluation of one transect at site, type form, and send to administrator; communications with administrator regarding tour; hold demonstration of macroinvertebrate, habitat and water quality monitoring for tour attendees at Fruen Mill stop; presentation to tour attendees regarding proposed Main Stem erosion repair project at Fruen Mill stop; and attend June 21 watershed tour.

James P. Herbert, Principal Engineer/Scientist 5.0 hours @ \$180.00 per hour	\$ 900.00
Karen L. Chandler, Principal Engineer/Scientist 5.2 hours @ \$165.00 per hour	\$ 858.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 12.2 hours @ \$130.00 per hour	\$ 1,586.00
Christopher J. Bonick, Engineer/Scientist/Specialist II 9.0 hours @ \$120.00 per hour	\$ 1,080.00
Jeffrey D. Weiss, Engineer/Scientist/Specialist II 2.0 hours @ \$125.00 per hour	\$ 250.00
Joshua R. Vosejpka, Engineer/Scientist/Specialist I 1.5 hours @ \$75.00 per hour	\$ 112.50
Technicians/Administrative.....	\$ 36.00
Expenses (Mileage/2WD field vehicle)	\$ 73.22
<i>Subtotal, 2016 Tour.....</i>	<i>\$ 4,895.72</i>
<i>Subtotal, Surveys & Studies</i>	<i>\$ 9,238.34</i>

WATER QUALITY/MONITORING

Northwood and Crane Lakes 2016 monitoring: prepare for and perform June monitoring; enter surface water field data into Equis; communications with aquatic plant survey contractor to prepare for plant survey, including providing base maps for the mapping of plant locations/density from surveys; and review and file laboratory reports.

Henry M. Runke, Principal Engineer/Scientist 1.0 hours @ \$175.00 per hour	\$ 175.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 0.9 hours @ \$130.00 per hour	\$ 117.00
Terri A. Olson, Engineer/Scientist/Specialist III 0.3 hours @ \$130.00 per hour	\$ 39.00

Kelly A. Wild, Engineer/Scientist/Specialist I	
0.6 hours @ \$85.00 per hour	\$ 51.00
Technicians/Administrative.....	\$ 496.00
Expenses (Mileage/2WD field vehicle/water quality meter)	\$ 81.54
Subtotal, Water Quality/Monitoring.....	\$ 959.54

WATER QUANTITY

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

Technicians/Administrative.....	\$ 1,143.00
Expenses (Mileage/2WD field vehicle)	\$ 160.86
Subtotal, Water Quantity.....	\$ 1,303.86
TOTAL ENGINEERING	\$ 37,233.24

SECRETARIAL SERVICES

SECRETARIAL SERVICES EXPENSES

Expenses for postage.

Expenses (Postage)	\$ 43.85
TOTAL SECRETARIAL SERVICES EXPENSES.....	\$ 43.85

ANNUAL REPORT

TOTAL ANNUAL REPORT	\$ 0.00
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PUBLIC COMMUNICATIONS

TOTAL PUBLIC COMMUNICATIONS	\$ 0.00
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WEBSITE

WEBSITE

Update water quality data for website.

Sterling G. Williams, Engineer/Scientist/Specialist III	
0.5 hours @ \$130.00 per hour	\$ 65.00
TOTAL WEBSITE.....	\$ 65.00

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

Communications with MCES staff on new flow measurement procedures; and file Sontek flow information.

Christopher J. Bonick, Engineer/Scientist/Specialist II
1.5 hours @ \$120.00 per hour \$ 180.00
Subtotal, Watershed Outlet Monitoring Program \$ 180.00
TOTAL WOMP \$ **180.00**

DIGITIZE HISTORIC PAPER FILES

DIGITIZE HISTORIC PAPER FILES

Organize/sort historic Flood Control Project construction plans (paper files); scan/digitize FCP construction plans; and internal meeting to review scanning results, questions, and next steps.

James P. Herbert, Principal Engineer/Scientist
2.0 hours @ \$180.00 per hour \$ 360.00
Karen L. Chandler, Principal Engineer/Scientist
3.2 hours @ \$165.00 per hour \$ 528.00
Technicians/Administrative..... \$ 775.00
Subtotal, Digitize Historic Paper Files \$ 1,663.00
TOTAL DIGITIZE HISTORIC PAPER FILES..... \$ **1,663.00**

CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

MAIN STEM CHANNEL RESTORATION, CEDAR LK RD TO DUPONT, PLUS FRUEN MILL (2017CR-M)

Prepare Closeout of Assistance (COA) application to secure Hennepin County funding of a Response Action Plan (RAP) for the project reach; provide scope of work and cost estimate for RAP to Hennepin County staff; provide COA application, supplementary information, and map of property locations to Hennepin County staff; follow up with Hennepin County staff regarding COA application status for RAP; internal follow-up regarding status of RAP and upcoming ERF grant application deadlines; and communications with administrator regarding next steps and schedule with RAP and ERF grant application.

Daniel J. Fetter, Principal Engineer/Scientist
2.2 hours @ \$200.00 per hour \$ 440.00
Karen L. Chandler, Principal Engineer/Scientist
0.9 hours @ \$165.00 per hour \$ 148.50
Jennifer L. Brekken, Engineer/Scientist/Specialist III
3.9 hours @ \$140.00 per hour \$ 546.00
Jeffrey D. Weiss, Engineer/Scientist/Specialist II

4.5 hours @ \$125.00 per hour	\$ 562.50
Joshua R. Vosejpka, Engineer/Scientist/Specialist I	
2.1 hours @ \$75.00 per hour	\$ 157.50
<i>Subtotal, Main Stem Channel Restoration, Cedar Lk Rd to Dupont, Plus Fruen Mill.....</i>	<i>\$ 1,854.50</i>
TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)	\$ 1,854.50

TMDL WORK

TMDL IMPLEMENTATION REPORTING

Update P8 model, including information for Plymouth Creek watersheds; internal staff meeting; and update figures.

Gregory J. Wilson, Consultant/Advisor	
1.5 hours @ \$155.00 per hour	\$ 232.50
Joshua R. Vosejpka, Engineer/Scientist/Specialist I	
15.5 hours @ \$75.00 per hour	\$ 1,162.50
Technicians/Administrative.....	\$ 1,398.00
<i>Subtotal, TMDL Studies</i>	<i>\$ 2,793.00</i>
TOTAL TMDL STUDIES.....	\$ 2,793.00

XP-SWMM PHASE II

XP-SWMM PHASE II

North Branch & Main Stem Modeling

Follow-up on data request; coordinate and meet with North Minneapolis H&H modeling team, and create figures for meeting; XP-SWMM QA/QC; select calibration events and calculate flows; perform hydraulic (rating curve) calibration at Douglas Drive; work on combined model and calibration events; review/revise watershed divides; perform hydrology calculations; peer review of model; internal discussions to answer modeling questions; QC of model between Medicine Lake and Highway 100; update hydrology and storage; capture water in model; fix errors resulting from checklist, adding initial depth; merge model to create combined model; storm group divides; modify stream cross sections near Highway 100; Wisconsin Avenue control structure: check gate information, estimate baseflow, and apply orifice conditions; gather rainfall gage data; process NEXRAD for calibration; check rainfall events and process xpx file, run Part A for baseflow; update model based on QA/QC; evaluate tunnel questions/research; working on downstream cross sections and XPSWMM nodes/links network; and develop/update project report based on work completed to-date.

James P. Herbert, Principal Engineer/Scientist	
1.0 hours @ \$180.00 per hour	\$ 180.00

Jennifer A. Koehler, Engineer/Scientist/Specialist III	
9.4 hours @ \$125.00 per hour	\$ 1,175.00
Greg D. Fransen, Engineer/Scientist/Specialist II	
0.9 hours @ \$110.00 per hour	\$ 99.00
Josiah J. Hawley, Engineer/Scientist/Specialist I	
4.1 hours @ \$90.00 per hour	\$ 369.00
Ross S. Mullen, Engineer/Scientist/Specialist I	
73.2 hours @ \$90.00 per hour	\$ 6,588.00
Lulu Fang, Engineer/Scientist/Specialist I	
69.2 hours @ \$75.00 per hour	\$ 5,190.00
Technicians/Administrative.....	\$ 1,164.00
Subtotal, XP-SWMM Phase II.....	\$ 14,765.00
TOTAL XP-SWMM PHASE II.....	\$ 14,765.00

SUMMARY TOTALS

Total Engineering	\$ 37,233.24
Total Secretarial Services Expenses	\$ 43.85
Total Annual Report/Website/Public Communications	\$ 65 .00
Total WOMP	\$ 180.00
Total Digitize Historic Paper Files.....	\$ 1,663.00
Total Capital Improvement Projects (Tax Levy).....	\$ 1,854.50
Total TMDL Work	\$ 2,793.00
Total XP-SWMM Phase II.....	\$ 14,765.00
TOTAL PAYABLE.....	\$ 58,597.59

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


