Mr. Jim de Lambert Bassett Creek Watershed Management Commission 7800 Golden Valley Road Golden Valley, MN 55427 Page # 1

Invoice # 23270051-2016-7

Project # 23/27-0051

Client # 59 September 02 2016

# Invoice of Account with BARR ENGINEERING COMPANY

For professional services during the period of July 30, 2016 through August 26, 2016

### **ENGINEERING**

#### **TECHNICAL SERVICES**

Complete Community Partners BWSR Clean Water Fund grant application for Metro Blooms Harrison Neighborhood, including creating image file, submit grant application (upload to eLINK), and provide grant submittal to administrator; provide Northwood Lake P8 model to developer's consultant in response to Plymouth request; coordination with Golden Valley staff regarding flood elevation of Sweeney Lake, comparison to Flood Insurance Rate Map, and letter of map amendment; communications with Minnetonka staff regarding BCWMC review process and submittals; provide old tunnel Bassett Creek drawings to consultant per administrator direction; internal discussion regarding Flood Control Project Operation & Maintenance Manual and Medicine Lake dam; communications with Medicine Lake consultant regarding floodplain and minimum building elevation information for Medicine Lake; coordinate with recording administrator regarding photo for BCWMC website; communications with Golden Valley staff and administrator regarding BCWMC review of city's floodplain ordinance; look into BCWMC review process flow chart for website; and communications with administrator regarding CWF grant submittal, 2017 budget, public hearing, APM/AIS meeting, recording administrator close-out tasks/file review, upcoming events, annual member city review and reporting, and status of project review.

James P. Herbert, Principal Engineer/Scientist 2.5 hours @ \$180.00 per hour\$	450.00
Karen L. Chandler, Principal Engineer/Scientist 13.1 hours @ \$165.00 per hour\$	2,161.50
Gregory J. Wilson, Consultant/Advisor 1.8 hours @ \$155.00 per hour\$	279.00
Sterling G. Williams, Engineer/Scientist/Specialist III  0.5 hours @ \$130.00 per hour\$	65.00

	Jennifer A. Koehler, Engineer/Scientist/Specialist III
100.00	0.8 hours @ \$125.00 per hour\$_
3,055.50	Subtotal, Technical Services\$

#### MONTHLY MEETING PREPARATION

Communications/coordination with administrator regarding draft/final agenda and meeting packet for August 2016 meeting; review/edit draft July meeting minutes; review/edit Amy Herbert resolution of appreciation for August meeting packet; complete six-month BCWMC budget review for August meeting; prepare for August 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 August Commission meeting and upcoming meeting agenda items.

Subtotal Technical Services	8,606.97
Subtotal, Monthly Meeting Preparation	5,551.47
Expenses (Postage)	0.47
Technicians/Administrative	475.00
Karen L. Chandler, Principal Engineer/Scientist 20.4 hours @ \$165.00 per hour	3,366.00
James P. Herbert, Principal Engineer/Scientist 9.5 hours @ \$180.00 per hour	1,710.00

#### **PLAT REVIEW**

## 10th Ave-UP Rail Culvert Repair (2015-36)

Communications with Golden Valley staff regarding status of project; and provide XP-SWMM model to city's consultant per city request.

Karen L. Chandler, Principal Engineer/Scientist	
0.3 hours @ \$165.00 per hour	\$ 49.50
Jennifer A. Koehler, Engineer/Scientist/Specialist III	
0.6 hours @ \$125.00 per hour	\$ 75.00
Subtotal, 10 <sup>th</sup> Ave-UP Rail Culvert Repair	\$ 124.50

# Pilgrim Lane Elementary Additions (2016-12)

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

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$180.00 per hour	\$	180.00
Josh P. Phillips, Engineer/Scientist/Specialist I 1.4 hours @ \$70.00 per hour	\$	98.00
Subtotal, Pilgrim Lane Elementary Additions		278.00
Mortenson Headquarters Addition (2016-14)		
Update GIS map of BCWMC development review locations.		
Candice H. Kantor, Engineer/Scientist/Specialist II  0.1 hours @ \$100.00 per hour	\$	10.00
Josh P. Phillips, Engineer/Scientist/Specialist I  0.3 hours @ \$70.00 per hour	\$	21.00
Subtotal, Mortenson Headquarters Addition	\$	31.00
1143 South Shore Drive-Medicine Lake WCA (2016-16)		
Communications with legal counsel and internal staff regarding Declaration Covenants; communications with applicant's consultant regarding revised submittals; organize information; and prepare WCA no-loss Notice of Decisi agent, and Technical Evaluation Panel along with previous wetland restoration.	ubmittals; on and se	review final end to applicant,
Karen L. Chandler, Principal Engineer/Scientist 0.2 hours @ \$165.00 per hour	\$	33.00
Karen S. Wold, Engineer/Scientist/Specialist II 4.9 hours @ \$120.00 per hour	\$	588.00
Subtotal, 1143 South Shore Dr-Med Lake WCA	\$	621.00
Beacon Academy (2016-18)		
Review revised grading, drainage and erosion control plans; communications wand send final approval letter to city staff.	ith applic	ant, and prepare
James P. Herbert, Principal Engineer/Scientist 1.9 hours @ \$180.00 per hour	\$	342.00
Subtotal, Beacon Academy	\$	342.00
Plymouth PW Campus Facility Addition (2016-19)		
Update GIS map of BCWMC development review locations.		
Candice H. Kantor, Engineer/Scientist/Specialist II  0.1 hours @ \$100.00 per hour	\$	10.00
Josh P. Phillips, Engineer/Scientist/Specialist I  0.3 hours @ \$70.00 per hour	\$	21.00
Subtotal, Plymouth PW Campus Facility Addition		31.00
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# Cherrywood Pointe (2016-20)

Review revised grading, drainage and erosion control plans; and prepare and send comments to applicant.

James P. Herbert, Principal Engineer/Scientist  0.3 hours @ \$180.00 per hour\$	54.00
Candice H. Kantor, Engineer/Scientist/Specialist II  1.0 hours @ \$100.00 per hour\$	100.00
Josh P. Phillips, Engineer/Scientist/Specialist I 5.4 hours @ \$70.00 per hour\$_	378.00
Subtotal, Cherrywood Pointe\$	532.00
<u>Luther Support Center (2016-24)</u>	
Communications with applicant.	
Candice H. Kantor, Engineer/Scientist/Specialist II  0.2 hours @ \$100.00 per hour\$_	20.00

### 10715 S Shore Drive-Medicine Lake WCA (2016-25)

Review MNRAM results and provide comments to Medicine Lake's consultant; send Notice of Decision for wetland delineation approval to applicant, agent, and Technical Evaluation Panel; and internal discussion regarding potential wetland impacts of proposed project.

Subtotal, Luther Support Center .....\$

20.00

Karen S. Wold, Engineer/Scientist/Specialist II  1.6 hours @ \$120.00 per hour	192.00
Candice H. Kantor, Engineer/Scientist/Specialist II  0.5 hours @ \$100.00 per hour	50.00
Subtotal, 10715 S Shore Drive-Medicine Lake WCA\$	242.00

# Hutton House-10715 S Shore Drive (2016-25)

Preliminary review of project plans, including flood plain review; communications with applicant; and internal discussion regarding potential wetland impacts of proposed project.

James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$180.00 per hour	\$ 180.00
Karen L. Chandler, Principal Engineer/Scientist 0.5 hours @ \$165.00 per hour	\$ 82.50
Candice H. Kantor, Engineer/Scientist/Specialist II  1.0 hours @ \$100.00 per hour	\$ 100.00
Josh P. Phillips, Engineer/Scientist/Specialist I 0.5 hours @ \$70.00 per hour	\$ 35.00

Technicians/Administrative	\$ <u></u>	27.00
Subtotal, Hutton House-10715 S Shore Drive	\$	424.50
226 Peninsula Road - WCA (2016-26)		
Review wetland delineation report; prepare and submit a Wetland Conservation schedule and conduct wetland delineation site review; and provide comments to requesting changes to wetland delineation report and boundary.		
Karen S. Wold, Engineer/Scientist/Specialist II 5.2 hours @ \$120.00 per hour	\$	624.00
Expenses (Mileage)	<u>\$</u>	16.20
Subtotal, 226 Peninsula Road - WCA	\$	640.20
226 Peninsula Road (2016-26)		
Communications with Medicine Lake consultant regarding proposed work in floor	odplain.	
Karen L. Chandler, Principal Engineer/Scientist  0.2 hours @ \$165.00 per hour	\$	33.00
Subtotal, 226 Peninsula Road	\$	33.00
Brookview Community Center (2016-27)		
Preliminary review of project; and internal coordination.		
James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$180.00 per hour	\$	90.00
Karen L. Chandler, Principal Engineer/Scientist 0.2 hours @ \$165.00 per hour	\$	33.00
Technicians/Administrative	\$	<u>45.00</u>
Subtotal, Brookview Community Center	\$	168.00
Liberty Crossing Flood Mitigation (2016-28)		
Review grading, drainage and erosion control plans; and prepare and send apprecity staff.	oval/com	nment letter to
James P. Herbert, Principal Engineer/Scientist  2.2 hours @ \$180.00 per hour	\$	396.00
Candice H. Kantor, Engineer/Scientist/Specialist II  2.4 hours @ \$100.00 per hour	\$	240.00
Technicians/Administrative	\$	45.00
Subtotal, Liberty Crossing Flood Mitigation	\$	681.00

# @glenwood Campus (2016-29)

Plat review set up; preliminary review of submittal; attend meeting with Minneapolis staff; and coordination with applicant.

James P. Herbert, Principal Engineer/Scientist 5.3 hours @ \$180.00 per hour	¢	954.00
·	₽	334.00
Candice H. Kantor, Engineer/Scientist/Specialist II  0.3 hours @ \$100.00 per hour	\$	30.00
Technicians/Administrative	\$	144.00
Expenses (Postage)	\$	0.47
Subtotal, @glenwood Campus	\$	1,128.47
Fretham 24 Second Add Lots 1-3 (2016-30)		
Plat review set up; preliminary review; and communications with site developer regard	rding	schedule.
James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$180.00 per hour	\$	180.00
Karen L. Chandler, Principal Engineer/Scientist 1.0 hours @ \$165.00 per hour	\$	165.00
Josh P. Phillips, Engineer/Scientist/Specialist I  0.8 hours @ \$70.00 per hour	\$	56.00
Technicians/Administrative	\$	54.00
Subtotal, Fretham 24 Second Add Lots 1-3	\$	455.00
GV Tank Mound Project (2016-31)		
Plat review set up; and review grading, drainage and erosion control plans.		
James P. Herbert, Principal Engineer/Scientist 1.0 hours @ \$180.00 per hour	\$	180.00
Karen L. Chandler, Principal Engineer/Scientist  0.5 hours @ \$165.00 per hour	\$	82.50
Adam K. Howard, Engineer/Scientist/Specialist II  0.3 hours @ \$100.00 per hour	\$	30.00
Josh P. Phillips, Engineer/Scientist/Specialist I  3.7 hours @ \$70.00 per hour	\$	259.00
Technicians/Administrative	\$	72.00
Expenses (Postage)	\$	0.47
Subtotal, GV Tank Mound Project		623.97
Subtotal Plat Review	\$	6,375.64

#### PRELIMINARY COMMUNICATIONS AND NON-FEE REVIEWS

#### **PRELIMINARY COMMUNICATIONS**

Communications with consultant and Minnetonka staff regarding TCF site, coordination and preliminary review regarding site in St. Louis Park; and communications with Golden Valley staff regarding proposed aerators in wetland, BCWMC requirements and water quality impacts.

James P. Herbert, Principal Engineer/Scientist  1.4 hours @ \$180.00 per hour\$	252.00
Karen L. Chandler, Principal Engineer/Scientist  2.3 hours @ \$165.00 per hour\$	<u>379.50</u>
Subtotal, Plat Review – Preliminary Communications\$	631.50
NON-FEE REVIEWS	
Subtotal Non-Fee Reviews\$	0.00
Subtotal Preliminary Communications and Non-Fee Reviews\$	631.50
COMMISSION AND TAC MEETINGS	
COMMISSION AND THE WEETINGS	
Attend August 18 Commission meeting.	
	511.50

#### **SURVEYS & STUDIES**

## **APM/AIS TASK FORCE**

Revise table of other organizations' activities regarding AIS and native plant management to include Nine Mile Creek WD, Ramsey-Washington Metro WD, Valley Branch WD and Riley Purgatory Bluff Creek WD; communications with administrator and internal staff regarding materials for August 16 meeting; complete final edits to table; attend August 16 APM/AIS committee meeting; develop ideas for BCWMC roles; and communications with administrator regarding "rapid response" to AIS.

Karen L. Chandler, Principal Engineer/Scientist 9.0 hours @ \$165.00 per hour\$	1,485.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 7.7 hours @ \$130.00 per hour\$	1,001.00
Sterling G. Williams, Engineer/Scientist/Specialist III 7.0 hours @ \$130.00 per hour\$	910.00

Expenses (Mileage)	\$ 25.38
Subtotal, APM/AIS Task Force	\$ 3,421.38
Subtotal, Surveys & Studies	\$ 3,421.38

#### WATER QUALITY/MONITORING

Northwood and Crane Lakes 2016 monitoring: prepare for and perform August monitoring of Northwood Lake; review August field water quality data from Northwood Lake; enter surface water quality and field data into Equis; analyses of Crane Lake and Northwood Lake zooplankton and phytoplankton samples collected in June, July and August; review and file laboratory reports; and communications with laboratory.

Subtotal, Water Quality/Monitoring\$	4,386.58
Expenses (Pace Analytical/Endangered Resource Services/Mileage/Canoe/2WD field vehicle/water quality meter)\$	317.58
Technicians/Administrative\$	1,190.00
Terri A. Olson, Engineer/Scientist/Specialist III  0.8 hours @ \$130.00 per hour\$	104.00
Margaret R. Rattei, Engineer/Scientist/Specialist III 20.0 hours @ \$130.00 per hour\$	2,600.00
Henry M. Runke, Principal Engineer/Scientist  1.0 hours @ \$175.00 per hour\$	175.00

## **WATER QUANTITY**

Measure and review lake level elevations as part of the lake-gauging program; communications with administrator, Plymouth staff and Golden Valley staff regarding heavy rainfall; and look into Westwood Lake outlet questions.

Subtotal, Water Quantity\$	529.66
Expenses (Mileage/2WD field vehicle) <u>\$</u>	54.16
Technicians/Administrative\$	360.00
Karen L. Chandler, Principal Engineer/Scientist 0.7 hours @ \$165.00 per hour\$	115.50

#### MUNICIPAL PLAN REVIEW

MWMO plan amendment: review amendment and communications with administrator regarding Old Tunnel comments.

	Karen L. Chandler, Principal Engineer/Scientist
396.00	2.4 hours @ \$165.00 per hour\$_
396.00	Subtotal, Municipal Plan Review\$
24,859.23	TOTAL ENGINEERING\$

SECRETARIAL SERVICES	
SECRETARIAL SERVICES EXPENSES	
Expenses for postage.	
Expenses (Postage)\$	39.19
TOTAL SECRETARIAL SERVICES EXPENSES\$	39.19
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 measurements at WOMP station; download flow file; and send data to MC	CES staff.
Christopher J. Bonick, Engineer/Scientist/Specialist II 5.0 hours @ \$120.00 per hour\$	600.00
Expenses (Sontek ADV/Accoustic Doppler Velocimeter)\$	64.00
Subtotal, Watershed Outlet Monitoring Program\$	664.00
TOTAL WOMP\$	664.00
DIGITIZE HISTORIC PAPER FILES	
DIGITIZE HISTORIC PAPER FILES	
Scan/digitize Flood Control Project construction plans.	
Technicians/Administrative\$	348.00
Subtotal, Digitize Historic Paper Files\$	348.00
TOTAL DIGITIZE HISTORIC PAPER FILES\$	348.00

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

#### FOUR SEASON MALL AREA WATER QUALITY PROJECT (NL-2)

Communications with administrator regarding proposed project; review cost/lb TP removed for recent projects and share information with administrator; review feasibility study information for approved Four Seasons water quality CIP project; communications with administrator, Plymouth staff and internal staff regarding annualized costs for original (2012) CIP and proposed Four Seasons project; locate and email Four Seasons water quality project CIP agreement to administrator; communications with developer's consultant regarding annualized costs and MIDS flexible treatment options; review Agora development narrative; communications with administrator and developer's consultant regarding TP removals and summary table for Commission meeting; update 2012 construction cost estimate to 2016 dollars, based on ENR cost indices; develop updated annualized costs and annual TP removal costs for original Four Seasons water quality project; develop annualized costs for Agora development project; respond to Alternate commissioner Goddard's questions regarding Four Seasons/Agora redevelopment; communications with administrator and Plymouth staff regarding coordination for review of Four Seasons redevelopment project; and internal communications regarding proposed peat infiltration BMP.

James P. Herbert, Principal Engineer/Scientist  0.8 hours @ \$180.00 per hour	\$ 144.00
Karen L. Chandler, Principal Engineer/Scientist 14.8 hours @ \$165.00 per hour	\$ 2,442.00
Adam K. Howard, Engineer/Scientist/Specialist II  2.8 hours @ \$100.00 per hour	\$ 280.00
Subtotal, Four Seasons Mall NB-07	\$ 2,866.00
HONEYWELL POND EXPANSION (2016) (BC-4)	
Communications with Golden Valley staff regarding project construction.	
Karen L. Chandler, Principal Engineer/Scientist  0.3 hours @ \$165.00 per hour	\$ 49.50
Subtotal, Honeywell Pond Expansion (2016)	\$ 49.50

# PLYMOUTH CREEK RESTORATION, ANNAPOLIS LN TO 2,500 FT UPSTREAM OF ANNAPOLIS LANE (2017CR-P)

Review/revise BWSR Clean Water Fund grant application for Plymouth Creek restoration project and email revised application to administrator; complete final CWF grant application, including creating image file; submit grant application (upload to eLINK); and provide grant submittal to administrator.

Karen L. Chandler, Principal Engineer/Scientist	<b>.</b>	
3.5 hours @ \$165.00 per hour	\$	5//.50
Jennifer A. Koehler, Engineer/Scientist/Specialist III		
0.8 hours @ \$125.00 per hour	\$	100.00

Joshua R. Vosejpka, Engineer/Scientist/Specialist I	
0.5 hours @ \$75.00 per hour\$	37.50
Subtotal, Plymouth Creek Restoration, Annapolis Ln to 2,500 Ft	
Upstream of Annapolis Lane\$	715.00

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

Communications with administrator and internal communications regarding Hennepin County Environmental Response Fund grant application process; provide write-ups to administrator for August agenda memo regarding Response Action Plan (RAP) and ERF grant application agenda items; update cost estimate for environmental response during project construction; and prepare for and attend August 18 Commission meeting to present/discuss draft RAP and ERF grant application.

Karen L. Chandler, Principal Engineer/Scientist 3.8 hours @ \$165.00 per hour\$	627.00
Daniel J. Fetter, Principal Engineer/Scientist 5.0 hours @ \$200.00 per hour\$_	1,000.00
Subtotal, Main Stem Channel Restoration, Cedar Lk Rd to Dupont, Plus Fruen Mill\$	1,627.00

#### BASSETT CREEK PARK & WINNETKA PONDS DREDGING FEASIBILITY STUDY

Prepare for and attend August 17 kick-off meeting with administrator, Commissioner Mueller, and Crystal staff; coordinate bathymetric survey of ponds; perform bathymetric survey at Bassett Creek Park Pond, Winnetka Pond East, and Winnetka Pond West; create bathymetric survey drawings for Bassett Creek Park Pond, Winnetka Pond East, and Winnetka Pond West; and coordinate sediment sampling and wetland delineation.

Karen L. Chandler, Principal Engineer/Scientist 7.3 hours @ \$165.00 per hour\$	1,204.50
Candice H. Kantor, Engineer/Scientist/Specialist II 5.4 hours @ \$100.00 per hour\$	540.00
Technicians/Administrative\$	9,746.50
Expenses (Mileage/2WD field vehicle/GPS Survey System)	1,887.54
Subtotal, Bassett Crk Pk & Winnetka Ponds Dredging Feasibility Study\$	13,378.54
TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)\$	18,636.04

# **TMDL WORK**

#### **TMDL IMPLEMENTATION REPORTING**

Update P8 model.

TOTAL TMDL STUDIES	155.00
Subtotal, TMDL Studies\$	155.00
1.0 hours @ \$155.00 per hour\$	155.00
Gregory J. Wilson, Consultant/Advisor	

#### **XP-SWMM PHASE II**

#### XP-SWMM PHASE II

#### North Branch & Main Stem Modeling

Create and QAQC impervious surface datasets; internal meetings regarding QAQC and model status; budget update; follow-up with Golden Valley and St. Louis Park staff regarding Westwood Lake outlet/lake levels; review midstream model initial depths; process NEXRAD data; develop longest flow paths; work on initial depths in model; revise watersheds along Minneapolis border; water capture/debugging in model; updates to sealed nodes (manholes/pipe joints); review small rainfall runs; develop N-Mpls hydrology input parameters; build N-Mpls SWMM model; address initial run errors; spot check N-Mpls pipe information; assign creek cross sections; and develop overflow cross sections.

Jennifer A. Koehler, Engineer/Scientist/Specialist III 4.3 hours @ \$125.00 per hour\$	537.50
Josiah J. Hawley, Engineer/Scientist/Specialist I  1.9 hours @ \$90.00 per hour\$	171.00
Joshua R. Vosejpka, Engineer/Scientist/Specialist I 9.9 hours @ \$75.00 per hour\$	742.50
Ross S. Mullen, Engineer/Scientist/Specialist I 62.0 hours @ \$90.00 per hour\$	5,580.00
Lulu Fang, Engineer/Scientist/Specialist I 21.2 hours @ \$75.00 per hour\$	1,590.00
Technicians/Administrative\$_	72.00
Subtotal, XP-SWMM Phase II\$	8,693.00
TOTAL XP-SWMM PHASE II\$	8,693.00

## **SUMMARY TOTALS**

Total Engineering\$	24,859.23
Total Secretarial Services Expenses\$	39.19
Total Annual Report/Website/Public Communications\$	0 .00
Total WOMP\$	664.00
Total Digitize Historic Paper Files\$	348.00
Total Capital Improvement Projects (Tax Levy)\$	18,636.04
Total TMDL Work\$	155.00
Total XP-SWMM Phase II\$	8,693.00
TOTAL PAYABLE\$	53 394 46
IVIALIAIAPEE	33,337.70

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