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engineering and environmental consultants

Bassett Creek WMO
7800 Golden Valley Road
Golden Valley, MN 55427

Page # 1
Invoice # 23270051-2015-7
Project # 23/27-0051
Client # 59
September 04, 2015

Invoice of Account with
BARR ENGINEERING COMPANY

For professional services during the period of
August 01, 2015 through August 28, 2015

ENGINEERING

TECHNICAL SERVICES

Communications with administrator; submit revised and final Flood Damage Reduction grant applications to MDNR staff for XP-SWMM model update funding, and communications with MDNR staff regarding application; communications with Crystal staff regarding BCWMC development requirements; internal meeting and follow-up regarding watershed divide edge-matching with adjoining WMOs; communications with Minneapolis staff regarding adding reach options for main stem project; internal discussions regarding past modeling in BCWMC/tunnel; communications with administrator regarding Fruen Mill reach of creek; and communications with Golden Valley staff and Alternate Commissioner McDonald Black regarding filling in floodplain and other shoreline work at Sweeney Lake.

James P. Herbert, Principal Engineer/Scientist	
1.5 hours @ \$175.00 per hour.....	\$ 262.50
Karen L. Chandler, Consultant/Advisor	
14.2 hours @ \$160.00 per hour.....	\$ 2,272.00
Joshua R. Vosejпка, Engineer/Scientist/Specialist I	
3.5 hours @ \$75.00 per hour	\$ 262.50
Technicians/Administrative	\$ 65.00
<i>Subtotal, Technical Services</i>	\$ 2,862.00

MONTHLY MEETING PREPARATION

Communications/coordination with administrator and recorder regarding draft/final agenda and meeting packet for August 2015 meeting; review/edit draft July meeting minutes; prepare for August Commission meeting, including setting up and attending pre-meeting conference call with Chair de Lambert and administrator to review meeting agenda; provide grant tracking information to administrator; prepare memo regarding detailed XP-SWMM (Phase 2) scope for August Commission meeting; and coordination and communications with administrator and internal staff regarding follow-up tasks from August Commission meeting and upcoming meeting agenda items.

James P. Herbert, Principal Engineer/Scientist 7.2 hours @ \$175.00 per hour.....	\$ 1,260.00
Karen L. Chandler, Consultant/Advisor 16.5 hours @ \$160.00 per hour.....	\$ 2,640.00
Jennifer A. Koehler, Engineer/Scientist/Specialist II 4.2 hours @ \$120.00 per hour.....	\$ 504.00
Technicians/Administrative	\$ 473.00
<i>Subtotal, Monthly Meeting Preparation.....</i>	<i>\$ 4,877.00</i>

WETLAND ISSUES

Respond to Golden Valley inquiry regarding wetland delineation.

James P. Herbert, Principal Engineer/Scientist 0.5 hours @ \$175.00 per hour.....	\$ 87.50
<i>Subtotal, Wetland Issues.....</i>	<i>\$ 87.50</i>
<i>Subtotal Technical Services.....</i>	<i>\$ 7,826.50</i>

PLAT REVIEW

Crossroads Commons, 2nd Addition (2015-09)

Coordination with applicant.

James P. Herbert, Principal Engineer Scientist 0.5 hours @ \$175.00 per hour.....	\$ 87.50
<i>Subtotal, Crossroads Commons, 2nd Addition</i>	<i>\$ 87.50</i>

Mini-Hops Gymnastics (2015-16)

Review revised information and coordination with applicant.

James P. Herbert, Principal Engineer Scientist 0.5 hours @ \$175.00 per hour.....	\$ 87.50
<i>Subtotal, Mini Hops Gymnastics.....</i>	<i>\$ 87.50</i>

Parking Lot Exp 7724 Winpark Drive (2015-19)

Review revised grading, drainage, and erosion control plans for project; coordination with applicant and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer Scientist 1.5 hours @ \$175.00 per hour.....	\$ 262.50
Candice M. Kantor, Engineer/Scientist/Specialist II 1.8 hours @ \$95.00 per hour	\$ 171.00
<i>Subtotal, Parking Lot Exp, 7724 Winpark Drive</i>	<i>\$ 433.50</i>

Golden Villas (2015-20)

Review grading, drainage, and erosion control plans for project; prepare review memo for August Commission meeting; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer Scientist 1.7 hours @ \$175.00 per hour.....	\$ 297.50
Candice M. Kantor, Engineer/Scientist/Specialist II 5.0 hours @ \$95.00 per hour	\$ 475.00
Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Golden Villas.....</i>	<i>\$ 815.00</i>

Hennepin County ACF Site Security Exp (2015-21)

Plat review set up and preliminary review.

James P. Herbert, Principal Engineer Scientist 0.2 hours @ \$175.00 per hour.....	\$ 35.00
Candice M. Kantor, Engineer/Scientist/Specialist II 0.5 hours @ \$95.00 per hour	\$ 47.50
Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Hennepin County ACF Site Security Exp.....</i>	<i>\$ 125.00</i>

Fretham Twenty-Four 2nd Addition (2015-22)

Plat review set up and preliminary review.

James P. Herbert, Principal Engineer Scientist 0.2 hours @ \$175.00 per hour.....	\$ 35.00
Candice M. Kantor, Engineer/Scientist/Specialist II 0.5 hours @ \$95.00 per hour	\$ 47.50
Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Fretham Twenty-Four 2nd Addition.....</i>	<i>\$ 125.00</i>

Tennant Co. Site Improvements (2015-23)

Plat review set up and preliminary review.

James P. Herbert, Principal Engineer Scientist 0.2 hours @ \$175.00 per hour.....	\$ 35.00
Candice M. Kantor, Engineer/Scientist/Specialist II 0.5 hours @ \$95.00 per hour	\$ 47.50
Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Tennant Co. Site Improvements.....</i>	<i>\$ 125.00</i>

Golden Villas Demolition (2015-20A)

Review grading, drainage, and erosion control plans for project; coordination with applicant; and prepare and send approval letter to city staff.

James P. Herbert, Principal Engineer Scientist 1.5 hours @ \$175.00 per hour.....	\$ 262.50
Candice M. Kantor, Engineer/Scientist/Specialist II 2.8 hours @ \$95.00 per hour	\$ 266.00
Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Golden Villas Demolition.....</i>	<i>\$ 571.00</i>

Ramada Conversion (2015-24)

Review preliminary plans at request of Golden Valley staff; communications with applicant; and provide preliminary comments to city staff.

James P. Herbert, Principal Engineer Scientist 0.5 hours @ \$175.00 per hour.....	\$ 87.50
Candice M. Kantor, Engineer/Scientist/Specialist II 1.8 hours @ \$95.00 per hour	\$ 171.00
Technicians/Administrative	\$ <u>52.00</u>
<i>Subtotal, Ramada Conversion.....</i>	<i>\$ 310.50</i>

Plymouth Creek Christian Church Add (2015-25)

Plat review set up.

Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Plymouth Creek Christian Church Add</i>	<i>\$ 42.50</i>

Sochacki Trail Paving (2015-26)

Plat review set up and communications with TRPD regarding trail project.

James P. Herbert, Principal Engineer Scientist 1.0 hours @ \$175.00 per hour.....	\$ 175.00
Technicians/Administrative	\$ <u>42.50</u>
<i>Subtotal, Sochacki Trail Paving.....</i>	<i>\$ 217.50</i>
<i>Subtotal Plat Review.....</i>	<i>\$ 2,940.00</i>

NON-FEE REVIEWS AND PRELIMINARY COMMUNICATIONS

PRELIMINARY COMMUNICATIONS

Attend August 6 meeting with Golden Valley city staff and Golden Valley Country Club staff regarding relocation of proposed bridge over Bassett Creek, communication and coordination with city staff and administrator, and provide flood elevation information to country club staff; communications with Golden Valley's consultant regarding Douglas Drive creek crossing; and communications with consultant and Medicine Lake city staff regarding proposed solar project.

James P. Herbert, Principal Engineer/Scientist 5.5 hours @ \$175.00 per hour.....	\$ 962.50
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Karen L. Chandler, Consultant/Advisor 1.5 hours @ \$160.00 per hour.....	\$ 240.00
Candice M. Kantor, Engineer/Scientist/Specialist II 0.3 hours @ \$95.00 per hour	\$ 28.50
Expenses (Mileage)	\$ 12.65
<i>Subtotal, Plat Review – Preliminary Communications</i>	<i>\$ 1,243.65</i>

NON-FEE REVIEWS

BLUE LINE LRT WCA LGU ADMIN

Golden Valley

Communication with Blue Line LRT wetland consultant regarding status of wetland delineation report submittal.

Karen S. Wold, Engineer/Scientist/Specialist II 0.2 hours @ \$115.00 per hour.....	\$ 23.00
<i>Subtotal, Golden Valley.....</i>	<i>\$ 23.00</i>

Robbinsdale

Communication with Blue Line LRT wetland consultant regarding status of wetland delineation report submittal.

Karen S. Wold, Engineer/Scientist/Specialist II 0.2 hours @ \$115.00 per hour.....	\$ 23.00
<i>Subtotal, Robbinsdale.....</i>	<i>\$ 23.00</i>
<i>Total Blue Line LRT WCA LGU Admin.....</i>	<i>\$ 46.00</i>

SW LRT

Review SW LRT stormwater management report for the Glenwood area, including proposed direct connection to the Bassett Creek tunnel; review requirements/obligations in Joint and Cooperative Agreement between BCWMC, MWMO and Minneapolis regarding connections to new tunnel; review existing XP-SWMM model results for new tunnel; review Twins stadium correspondence for precedence regarding connection to new tunnel; internal coordination; communications with administrator regarding requirements, status of review and modeling needs; and communications with Minneapolis staff.

James P. Herbert, Principal Engineer Scientist 9.3 hours @ \$175.00 per hour.....	\$ 1,627.50
Karen L. Chandler, Consultant/Advisor 3.1 hours @ \$160.00 per hour.....	\$ 496.00
Jennifer A. Koehler, Engineer/Scientist/Specialist II 7.2 hours @ \$120.00 per hour.....	\$ 864.00
<i>Subtotal, SW LRT</i>	<i>\$ 2,987.50</i>
<i>Subtotal Non-Fee Reviews</i>	<i>\$ 2,987.50</i>
<i>Subtotal Non-Fee Review and Preliminary Communication</i>	<i>\$ 4,277.15</i>

COMMISSION AND TAC MEETINGS

Attend August 20 Commission meeting.

Karen L. Chandler, Consultant/Advisor 3.7 hours @ \$160.00 per hour	\$ 592.00
<i>Subtotal, Commission and TAC Meetings</i>	<i>\$ 592.00</i>

SURVEYS & STUDIES

FLOOD CONTROL PROJECT REHAB AND RESPONSIBILITIES

Prepare for and attend August 4 meeting with Minneapolis staff regarding flood control project; internal meeting to discuss responsibilities and recommendations; communications with BCWMC Counsel; and begin preparing memo for September 8 TAC meeting.

Leonard J. Kremer, Principal Engineer/Scientist 7.5 hours @ \$185.00 per hour.....	\$ 1,387.50
James P. Herbert, Principal Engineer Scientist 0.5 hours @ \$175.00 per hour.....	\$ 87.50
Karen L. Chandler, Consultant/Advisor 8.1 hours @ \$160.00 per hour	\$ 1,296.00
Expenses (Mileage/parking)	\$ 16.40
<i>Subtotal, Flood Contract Proj Rehab & Responsibilities.....</i>	<i>\$ 2,787.40</i>
<i>Subtotal, Surveys & Studies.....</i>	<i>\$ 2,787.40</i>

WATER QUALITY/MONITORING

Review MPCA's chloride TMDL and Management Plan documents, communications with administrator regarding future chloride monitoring, and prepare draft comment letter for August meeting packet; respond to administrators' questions regarding the effectiveness of the Twin Lake alum treatment; follow up on MPCA's question regarding Bacteria TMDL implementation planning practices and public comments; internal meeting regarding water quality report format and water quality data on new website; Westwood Lake Monitoring: prepare for and conduct August 5 and August 20 water quality monitoring; QA/QC review of laboratory report and invoice and communications with laboratory; verify water quality data and enter data into EQUIS; attend August 24 site meeting with administrator, aquatic plant survey subconsultant, MDNR staff, and city staff to view rare plant species (*L. barbatus*) in Westwood Lake; Stream Biotic Index Monitoring: Prepare for and move Sweeney Lake branch biotic index monitoring station downstream to Woodstock Avenue; and follow-up mapping revisions.

Henry M. Runke, Principal Engineer/Scientist 3.5 hours @ \$175.00 per hour.....	\$ 612.50
Karen L. Chandler, Consultant/Advisor 2.2 hours @ \$160.00 per hour	\$ 352.00
Gregory J. Wilson, Engineer/Scientist/Specialist III 9.9 hours @ \$150.00 per hour.....	\$ 1,485.00

Margaret R. Rattei, Engineer/Scientist/Specialist III 4.1 hours @ \$125.00 per hour.....	\$ 512.50
Sterling G. Williams, Engineer/Scientist/Specialist III 0.5 hours @ \$125.00 per hour.....	\$ 62.50
Technicians/Administrative	\$ 1,332.50
Expenses (Pace Analytical/mileage/2WD and 4WD vehicle/ GPS/canoe/filtration apparatus/WQ meter)	\$ 3,124.36
<i>Subtotal, Water Quality/Monitoring.....</i>	<i>\$ 7,481.36</i>

WATER QUANTITY

Measure and review lake level elevations as part of the lake-gauging program; and provide administrator with list of lake water level monitoring locations.

Gregory J. Wilson, Engineer/Scientist/Specialist III 1.0 hours @ \$150.00 per hour.....	\$ 150.00
Technicians/Administrative	\$ 360.00
Expenses (Mileage/2WD vehicle).....	\$ 54.90
<i>Subtotal, Water Quantity</i>	<i>\$ 564.90</i>

FLOOD CONTROL PROJECT INSPECTION

Coordination regarding flood control project inspection.

James P. Herbert, Principal Engineer Scientist 0.5 hours @ \$175.00 per hour.....	\$ 87.50
<i>Subtotal, Flood Control Project Inspection.....</i>	<i>\$ 87.50</i>

TOTAL ENGINEERING\$ 26,556.81

SECRETARIAL SERVICES

SECRETARIAL SERVICES EXPENSES

Expenses for postage.

Expenses (Postage).....	\$ 56.63
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TOTAL SECRETARIAL SERVICES EXPENSES.....\$ 56.63

PLANNING

NEXT GENERATION PLAN

Prepare for and attend August 4 BWSR subcommittee meeting; communications with administrator regarding responses to 90-day comments and revise table of responses; prepare recommended plan revisions and prepare document for August Commission meeting regarding recommended changes to

the plan and Requirements document to incorporate Joint and Cooperative Agreement (with City of Minneapolis and MWMO) obligations related to the tunnel and communications with administrator; communications with administrator regarding recommendations for final plan and adoption; and make edits to document per responses to 90-day comments.

Karen L. Chandler, Consultant/Advisor 7.0 hours @ \$160.00 per hour.....	\$	1,120.00
Sterling G. Williams, Engineer/Scientist/Specialist III 6.9 hours @ \$125.00 per hour.....	\$	862.50
Expenses (Mileage)	\$	16.68
<i>Subtotal, Next Generation Plan</i>	\$	1,999.18
TOTAL PLANNING (Next Generation Plan)	\$	1,999.18

PLANNING (Funded through Flood Control Project Long-term Maintenance Funds)
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TOTAL PLANNING (Maintenance Funds).....	\$	0.00
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ANNUAL REPORT

TOTAL ANNUAL REPORT.....	\$	0.00
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PUBLIC COMMUNICATIONS

TOTAL PUBLIC COMMUNICATIONS	\$	0.00
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WEBSITE

TOTAL WEBSITE.....	\$	0.00
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WATERSHED OUTLET MONITORING PROGRAM (WOMP)

WATERSHED OUTLET MONITORING PROGRAM (WOMP)

Download and review flow data; and communications with MCES staff.

Christopher J. Bonick, Engineer/Scientist/Specialist II 2.0 hours @ \$115.00 per hour.....	\$	230.00
<i>Subtotal, Watershed Outlet Monitoring Program</i>	\$	230.00
TOTAL WOMP	\$	230.00

CAPITAL IMPROVEMENT PROJECTS (Funded through tax levy)

MAIN STEM: 10TH AVENUE-DULUTH STREET (2015CR)

Review 100% design plans, and prepare and approval letter to city.

Karen L. Chandler, Consultant/Advisor 0.5 hours @ \$160.00 per hour.....	\$ 80.00
Peter J. Hinck, Engineer/Scientist/Specialist II 0.5 hours @ \$120.00 per hour.....	\$ 60.00
<i>Subtotal, Main Stem: 10th Ave – Duluth Street</i>	<i>\$ 140.00</i>

HONEYWELL POND EXPANSION (2016) (BC-4)

Prepare for and attend August 4 Hennepin County budget committee meeting regarding BCWMC proposed levy; review administrator’s draft levy certification memo for August Commission meeting; review 50% design submittal from city’s consultant and provide comments to city staff and city’s consultant; and communications with city’s consultant.

Karen L. Chandler, Consultant/Advisor 1.9 hours @ \$160.00 per hour.....	\$ 304.00
Jennifer A. Koehler, Engineer/Scientist/Specialist II 2.4 hours @ \$120.00 per hour.....	\$ 288.00
<i>Subtotal, Honeywell Pond Expansion</i>	<i>\$ 592.00</i>

NORTHWOOD LAKE STORMWATER QUALITY IMPROVEMENTS PROJECTS (2016) (NL-1)

Prepare for and attend August 4 Hennepin County budget committee meeting regarding BCWMC proposed levy; review administrator’s draft levy certification memo for August Commission meeting; prepare and revise Clean Water Fund grant application and submit in eLink; and communications with administrator.

Karen L. Chandler, Consultant/Advisor 4.6 hours @ \$160.00 per hour.....	\$ 736.00
Gregory J. Wilson, Engineer/Scientist/Specialist III 6.1 hours @ \$150.00 per hour.....	\$ 915.00
Sterling G. Williams, Engineer/Scientist/Specialist III 9.6 hours @ \$125.00 per hour.....	\$ 1,200.00
<i>Subtotal, Northwood Lake Improvement Projects.....</i>	<i>\$ 2,851.00</i>

TOTAL CAPITAL IMPROVEMENTS PROJECTS (Tax Levy)\$ 3,583.00

CAPITAL IMPROVEMENT PROJECTS (Funded through Flood Control Project Long-term Maintenance Funds)
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TOTAL CAPITAL IMPROVEMENT PROJECTS (Maintenance Funds)	\$ 0.00
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TMDL WORK

TMDL IMPLEMENTATION REPORTING

Resolve Minneapolis subwatershed divides discrepancies.

Gregory J. Wilson, Engineer/Scientist/Specialist III 3.5 hours @ \$150.00 per hour.....	\$ 525.00
Joshua R. Vosejka, Engineer/Scientist/Specialist I 0.5 hours @ \$75.00 per hour	\$ 37.50
<i>Subtotal, TMDL Studies.....</i>	\$ 562.50
TOTAL TMDL STUDIES.....	\$ 562.50

XP-SWMM PHASE II

XP-SWMM PHASE II

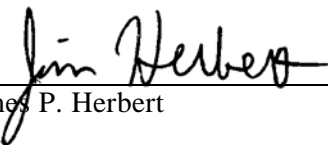
Plymouth Creek Modeling: Create GIS shapefile to support supplementary data request to cities and associated figures; perform watershed topology; create XP-SWMM Link-Node tool; perform storage calculations; fill data gaps with as-built information available prior to data request; compile data requests to cities (Minnetonka, Plymouth, Crystal, Golden Valley); add HEC-2 model data to GIS; internal discussion regarding hydrologic model set up; name subwatersheds and nodes; calculate subwatershed minimum elevations; compile Plymouth standard plate outlet structure and sizing; Medicine Lake Direct Modeling: create GIS shapefile to support supplementary data request to cities and associated figures; perform watershed topology; create XP-SWMM Link-Node tool; perform storage calculations; compile data requests to cities (Minnetonka, Plymouth, Crystal, Golden Valley); add HEC-2 model data to GIS; internal discussion regarding hydrologic model set up; name subwatersheds and nodes; calculate subwatershed minimum elevations; compile Plymouth standard plate outlet structure and sizing; Flow monitoring North Branch Bassett Creek: data download and review; swap batteries in monitoring station; and perform manual depth measurement.

Jennifer A. Koehler, Engineer/Scientist/Specialist II 5.2 hours @ \$120.00 per hour.....	\$ 624.00
Greg D. Fransen, Engineer/Scientist/Specialist II 3.5 hours @ \$105.00 per hour.....	\$ 367.50
Christopher J. Bonick, Engineer/Scientist/Specialist II 3.7 hours @ \$115.00 per hour.....	\$ 425.50
Ross S. Mullen, Engineer/Scientist/Specialist I 18.4 hours @ \$85.00 per hour.....	\$ 1,564.00
Lulu Fang, Engineer/Scientist/Specialist I 71.4 hours @ \$75.00 per hour.....	\$ 5,355.00
Technicians/Administrative	\$ 1,002.00
Expenses (Mileage/2WD vehicle).....	\$ 47.43
<i>Subtotal, XP-SWMM Phase II.....</i>	\$ 9,385.43
TOTAL XP-SWMM PHASE II.....	\$ 9,385.43

SUMMARY TOTALS

Total Engineering	\$ 26,556.81
Total Secretarial Services Expenses	56.63
Total Planning (Next Generation Plan)	\$ 1,999.18
Total Planning (Maintenance Funds)	0.00
Total Annual Report/Website/Public Communications	0.00
Total WOMP	230.00
Total Capital Improvement Projects (Tax Levy)	\$ 3,583.00
Total Capital Improvement Projects (Maintenance Funds)	0.00
Total TMDL Work	\$ 562.50
Total XP-SWMM Phase II	\$ <u>9,385.43</u>
TOTAL PAYABLE	\$ 42,373.55

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



James P. Herbert